REPEATER JOURNAL

CAROLINAS - VIRGINIA REPEATER ASSN, INC

AUGUST, 1979 VOLUME 8, NO. 3

cvra REPEATERS

Organized 1971

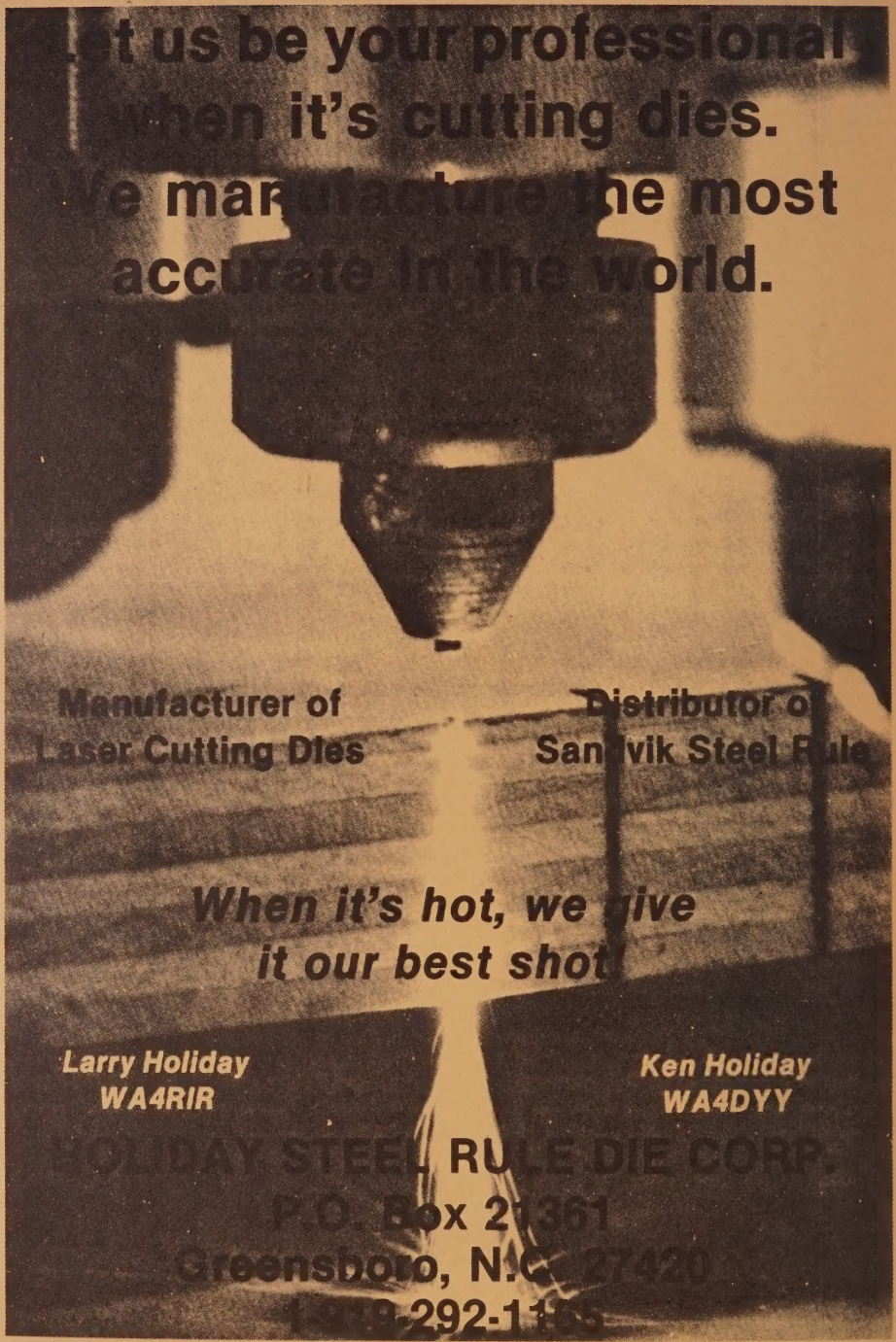
REPRESENTING VHF / UHF INTERESTS THROUGHOUT NORTH CAROLINA, SOUTH CAROLINA, & VIRGINIA

Cover Story . . .

Super Repeaters, On Super Towers!

Inside. . .

- **New Updated Computerized Repeater Indexes**
- **New Circulation Manager and Associate Membership Chairman Named for CVRA**
- **The Trials and Tribulations Of Setting Up for Fieldday!**


Let us be your professional
when it's cutting dies.
We manufacture the most
accurate in the world.
Manufacturer of
Laser Cutting Dies
Distributor of
Sandvik Steel Rule
When it's hot, we give
it our best shot
Larry Holiday
WA4RIR
Ken Holiday
WA4DYY
HOLIDAY STEEL RULE DIE CORP.
P.O. Box 21361
Greensboro, N.C. 27420
919-292-1165

REPEATER JOURNAL

CAROLINAS - VIRGINIA REPEATER ASSN. INC

AUGUST, 1979 "IN OUR 8th YEAR" VOLUME 8, NO. 3

ORGANIZED 1971

JOURNAL STAFF

EDITOR & PUBLISHER
Wayne C. Williams K4MOB
Route 1, Box 806
Colfax, N.C. 27235
(919) 993-5881

TECHNICAL EDITOR
Watson Gabriel WB4EXW
5939 Timberwood Trail
Kernersville, N.C. 27284
(919) 993-3110

CONTRIBUTING EDITOR
Michael K. Williams WA4JIY
123 Grandin Court
Danville, Va. 24541
(804) 793-8302

ADV. & SALES MGR.
Ken Holliday WA4DYY
1923 Halifax Court
High Point, N.C. 27260
(919) 454-4845

CIRCULATION MANAGER
Jim Bartlett WB4JMH
4110 Summerglen Dr.
Greensboro, N.C. 27406
(919) 855-8161

PRINTING OF JOURNAL
Golden Triangle Pr. Co.
1006 N. Raleigh St.
Greensboro, N.C. 27401
(919) 273-8221

ON THE COVER

One of the 28-88 Raleigh repeater dipoles. Its 1,800 feet off the ground. In center a "little" 1,250 tower is dwarfed. Photo ctsy Danny K4ITL, Raleigh.

EDITORIAL COMMENT

WHAT DO WE DO NOW???

Well it finally happened. Midland reported in mid June that they were OUT of 220 mhz. transceivers. You recall Clegg ran out near the first of the year and Wilson discontinued their 2205 handheld for 220 mhz.

Now where does this leave us? Well for right now, until the first of the year—we're up the creek without the proverbial paddle. Available now for 220 mhz. is the Drake UV-3, quite expensive if you get all three bands. The Yaesu 220 mhz. transceiver is synthesized and priced higher than most 2-meter synthesized rigs.

The simple matter of fact, 220 mhz. in this area just doesn't need a synthesized transceiver. In fact over 75% of the country isn't ready for a synthesized 220 rig.

A brief history, what got 220 mhz. going was when a Japanese company built 220 mhz. transceivers in anticipation for the proposed 220 mhz. Citizens band. When this was killed by the FCC, suddenly these rigs became available to the Amateur market. The companies which sell the rigs deny it emphatically, but it couldn't be a coincidence that three different companies suddenly decided to get Amateur 220 mhz. going. Regardless of the reason, 220 mhz. sprang to life with inexpensive Clegg, Midland and Cobra 12-channel crystal type rigs. Repeaters got going around the country and more Amateurs took advantage of this inexpensive way to get another FM band to operate.

Well, the production run of rigs was bound to run out, and finally it did. Some companies ordered another run in 1978, but now they're gone.

Both Midland and Clegg promise more crystal type rigs by the first of the year. If thats the case, they're probably going into production in Japan about now. The Yen-Dollar valuation of the 1979 production rigs, compared to the 1977-78 production rigs is quite different now. I expect we will be seeing the same Clegg FM-76 and Midland 13-509 rigs beyond the $200 mark.

Meanwhile, a company in California, Spectrum Communications is advertis-

Continued On Page 42

"The REPEATER JOURNAL" is published four times each year in the months of February, May, August, and November, for members of the Carolinas-Virginia Repeater Association. Permission is granted for quoting from the "REPEATER JOURNAL" provided credit is given. The CVRA will swap newsletters with other Repeater Councils and News Organizations on request. The "REPEATER JOURNAL" has a circulation of 3,500 copies and is entered as Third Class Mail at the Post Office in Burlington, N.C. 27215. The CVRA mailing address is: CVRA, P.O. Box 3325, Burlington, N.C. 27215.

TABLE OF CONTENTS

Editorial Comment - "What Do We Do Now??" 1
Annual CVRA Meeting Scheduled 3
Lindsay Says Goodbye - From Bachelor To Husband 3
Wide Area Repeaters - A New Breed! August Cover Story 7
Hamfest Season Still Going Strong 9
The CVRA Director And His Job 10
Politics and The CVRA, Can This Really Be True? 13
VHF Net Register 14
South Carolina State News Items 19
North Carolina State news Items 21
Virginia State News Items 22
Distribution of Repeaters by Frequency 23
CVRA Repeater Index (NC, SC, VA) Also Tenn 24-26
Repeater Indexes for Georgia, Maryland, W. Va. & Del 27
Virginia Club Meeting Calendar 30
How The Journal Is Put Together 33
South Carolina Club meeting Calendar 37
North Carolina Club Meeting Calendar 38
Field Day . . . 1979 (Mike Hits The Features Again This Issue) 43
Hamfest Calendar 47

NEWS AND AD DEADLINE FOR NOVEMBER JOURNAL - OCT. 1, 1979

CVRA OFFICERS AND COMMITTEE MEMBERS

PRESIDENT
Charles Durst WA4WTX
5508 Hallmark Road
Durham, N.C. 27712
(919) 471-8721

VICE PRESIDENT
John Fried W4WWD
Route 5, Box 112-C
Farmville, Va. 23901
(804) 392-6405

SECRETARY
Paul G. Marsha K4AVU
3551 Lakeland Dr.
Columbia, S.C. 29204
(803) 786-0842

TREASURER
Carl Smith N4AA
P.O. Box 6843
Asheville, N.C. 28806
(704) 683-3130

FREQ. COORDINATING CHM.
Al T. Ross, K4CAW
2404 Springwood Dr.
Greensboro, N.C. 27403
(919) 292-3105

FCC LIAISON COMM.
Cecil Oliver, WA4VQC, Chrm
5644 Anthony Road
Virginia Beach, Va. 23455
(804) 464-3892

James Menefee, jr. WA4KKY
55 Flint Ridge
Hillsborough, N.C. 27278
(919) 732-7863

TECH. ADVISOR COM.
Danny Hampton, K4ITL
550 Granite Street
Raleigh, N.C. 27608
(919) 832-8733

STATE DIRECTORS AND ASSISTANTS ARE LISTED ON BACK COVER

STATE FREQ. COORD.

VA. - Carter Cogle
N.C. - Ken Woodard
S.C. - Jack Watson
Addresses on Back

CVRA MEMBERSHIP COMMITTEES

REPEATER MEMBERSHIP
Bill Page WB4LWX
P.O. Box 871
Kinston, N.C. 28501
(919) 523-1718

S.C. ASSOC. MBR. ASST.
Lane Tarleton WA4ZQQ
105 Hickory Knob Ct.
Fort Mill, S.C. 29715
(803) 547-2618

ASSC. MBR. CHAIRMAN
Larry McLaurin WB4VJE
1114 Wiley Lewis Road
Greensboro, N.C. 27406
(919) 273-3112

ASSOC. MBR. ASST.
Lindsay Cleveland W4IZI
P.O. BOX 3325
Burlington, N.C. 27215

CVRA ANNUAL MEETING SCHEDULED

- By Charlie Durst, WA4WTX CVRA President

The annual meeting of the CVRA has been scheduled for Saturday evening, September 1, at the Governor's Inn Motel in Shelby. A dutch treat dinner is planned for 6:00 p.m. with the business meeting to follow at approximately 7:30 p.m.

According to the Bylaws of the Association, Officers will be elected for 1980-81. A nominating committee will prepare a slate of nominees for the offices of President, Vice president, Secretary, and Treasurer. The nominees must be Repeater Representatives. Additional nominations will be accepted for the four offices when submitted in writing with the signatures of five Repeater Representatives. The new officers will take over on January 1, 1980.

Several very important matters will be discussed in addition to the election activities. Possible affiliations with groups in Tennessee, Alabama, Florida, and Georgia will be discussed. Some special presentations will be made at the meeting.

All Repeater Representatives should plan to attend as this is the main meeting of the year for the Association.

Lindsay Cleveland, W4IZI, our Associate Membership Chairman for more years than I can remember, is moving to the chicago area while his XYL, Linda, WB4CTR, completes her college education there.

When Lindsay took the job of Associate Membership Chairman, membership and Journal circulation were fairly small. Over the years, both have grown into a monumental task. But Lindsay rose to the challenge and did an ou only did he spend many hours wit of the other hams in the Burlin membership list and Journal dist many hours at hamfests manning Lindsay also made a significant co on the rewriting of the Bylaws of th

Lindsay, we'll miss hearing you and seeing your smiling face at h forward to the return of the Clevela gets her degree and Lindsay g (putting wife through college) degr

CHANGES TO REPEATI

If your club or repeater group changes in your listing in the repe Journal, notify in writing your Stat tor. He will see that the changes are

FROM BACHELOR TO HUSBAND AGAIN . . . I MUST LEAVE YOU

- by Lindsay Cleveland, W4IZI

Exactly five years ago, Bill Parris (then K4GHR, now AA4R) drove up from Charlotte with a cardboard full of supplies and stuff to turn over the Associate Membership duties to me. Included was a small deck of 250 3x5 cards for the Associate members. Much has changed in those five years and a lot of effort on the part of a lot of people has made quite a difference in the CVRA. In that time I have picked up a few other Amateur Radio 'duties" in the Burlington area. But now the time has come for me to stop "hogging all the glory" and let others have a chance to participate in other areas of Amateur Radio.

This is the first summer that the XYL (Linda, WB4CTR) didn't come home from school. She has been at it for two years working to become a Chiropractor and she has at least another three years to go. We have been able to have a few times together between summers, but Chicago is a long way to go just to get a hug now and then. Fortunately, the fine folks at Western Electric have found me a very nice job up that way at a place only five miles from her College. So the middle of July we got to be together again on a permanent basis. Now instead of spending my "spare time" on ham radio, I get to be her cook, cleaning man, housekeeper, yard man, etc. ("And be quiet, I'm studying!") And so, goodbye to these carefree batchelor days; I get to be a husband again!

In light of this move, I will need to give up the various pastimes here in the CVRA area and pass

Twenty Second Annual

SHELBY N. C. HAMFEST

The Grand-Daddy of them all.

SATURDAY PRIZE: KDK 2 meter Transceiver #FM, 2016-A with power supply. Drawing 5PM Saturday.

SUNDAY FIRST PRIZE: KENWOOD TS 820-S with Digital read-out. Drawing 2PM Sunday.

SECOND PRIZE: MIDLAND 2 meter Transceiver, Model 13-510A Synthesized. Complete station with power supply, 11 element beam and magnetic mobile antenna.

THIRD PRIZE: DENTRON linear amplifier #GLA 1000.

You do not have to be present to win any of the main prizes. . .Registration $3

PLUS many, many more prizes.

Some of the motels in the area are listed below. They recommend that you call well in advance as their week-end business is good and reservations may be a problem.

SHELBY - Holiday Inn, Governors Inn, Hagers.

KINGS MOUNTAIN - Royal Villa

GASTONIA - Mid-town, Howard Johnson, Holiday Inn, Scottish Inn

GAFFNEY - Holiday Inn

FOREST CITY - Gardo's, Isothermal, Goode's

LINCOLNTON - Town & Country

HICKORY - Howard Johnson, Holiday Inn, Mull's, Ramada Inn.

Saturday & Sunday, Sept. 1 & 2

MOVED TO CLEVELAND COUNTY FAIRGROUNDS TO BETTER ACCOMODATE THE THOUSANDS WHO COME

On US 74 Business on the east side of Shelby

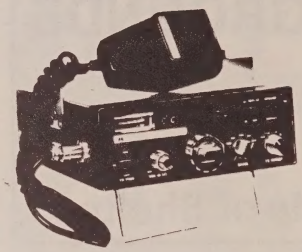
- Free Admittance as has always been our policy.
- Free parking space on the grounds, space for more than a thousand cars.
- Special Close-in parking for the disabled.
- Clean, Sanitary Rest Rooms, No more Portajons.
- Food service on the grounds... Shelby's famous Barbecue sandwiches and a variety of other food and snacks...with most of Shelby's fine eating places within one mile.
- Trailer facilities, 40 sites with full hook-ups, water, sewer and electricity. Ample power for your Air-Conditioners. Unlimited field space for self-contained trailers.
- Test area provided for testing that possible purchase. Dummy load, 2 meter power supply and ect.
- Biggest Flea Market ever, Plenty space for all. Flea Market displayers and Tailgate Traders must register. Special gate for your entry to grounds.
- New equipment dealers as well as used dealers may have inside space with power available and overnight security at a nominal charge.
- Easy to locate as the site is on Business US 74 and NC 180 on the east side of Shelby.
- Registration $3.00
- Remember this, "NO MEMBER OF THE SHELBY RADIO CLUB OR ANY MEMBER OF THEIR FAMILY IS ELIGIBLE TO WIN A PRIZE.
- CVRA annual meeting.
- Special Booth for 10X International.

SPONSORED BY SHELBY RADIO CLUB
FOR FURTHER INFORMATION Contact WA4BBN, Dale Mauney, 1158 East Marion St., Shelby, N.C. 28150 - Telephone 482-4951

TALK IN

146.28-88 146.52
147.945-345 3.923

New East Proudly Announces New Line Of Midlands. . .



NEW EAST - The New Source For New Low Prices In New Amateur Gear

Tel. 1-919-792-4874

MIDLAND 13-509
220 MHZ 12-CHANNEL
10 WATT XCVR.

Includes Mobile Bracket and Microphone.

VISA

master charge
THE INTERBANK CARD

Midland's 13-510 Is One Great 2-Meter Mobile

WE SHIP UPS

143-149 Mhz. 1200 Channels
1-10 & 25 Watt Switch Positions

NEW! The 13-510A P.L.L. synthesizer delivers 1,200 frequencies between 143.00 and 149.00 MHz . . . the full 2-meter band, plus MARS.

NEW! The 13-510A will operate with up to a 6 MHz split between TX and RX frequencies.

NEW! The 13-510A microphone connector is pre-wired for your Touch-Tone* encoding microphone.

NEW! The 13-510A has a 7-pin accessory connector for your Touch-Tone* dial, tone-burst generator or discriminator meter.

NEW! The 13-510A is compatible with available popular CTCSS continuous tone-coded squelch system accessories.

NEW! The 13-510A has 3 transmitter outputs: 1, 10 and 25 watts.

OUR 13-510 A IS EVEN BETTER

USED EQUIPMENT SPECIALS

CALL US!

POWER SUPPLIES FOR YOUR MIDLAND . . . IN STOCK

BEAMS AND ANTENNAS FOR YOUR MIDLAND . . . IN STOCK

NEW EAST ELECTRONICS

1104 Washington Street (1-919-792-4874) Williamston, N. C. 27892

HOURS: MF 8 AM - 5 PM; SAT. 8 AM - 12 PM

JOHN - WA4TKJ NANCY - KA4BQD STEVE - MANAGER - TECHNICIAN

WIDE-AREA REPEATERS A NEW BREED!

(Editors Note:) If you did not know by now, some big things are happening around Raleigh, N.C. - up to 2,000 feet big. Just southeast of Raleigh, The WRAL-TV and FM tower stands tall above the relatively flat terrain around the State capitol. It's on that tower that Capitol Broadcasting Co. has made available space for Danny Hampton, K4ITL and his 28-88 WR4AOE repeater. The decision by Capitol Broadcasting Co. was made weighing a potential revenue site on the tower against a valuable public service for over 10,000 square miles with solid coverage (1/5 of the state) and more under favorable conditions. Fortunately for Ham Radio, the public service won out!

Danny Hampton, K4ITL, long active in repeater work in the Raleigh area (and instrumental in helping groups in other areas overcome some of the many problems with their repeater systems) has found that a wide-area repeater is a different breed of repeater. Danny touches on a few of the things that make them different in this story.

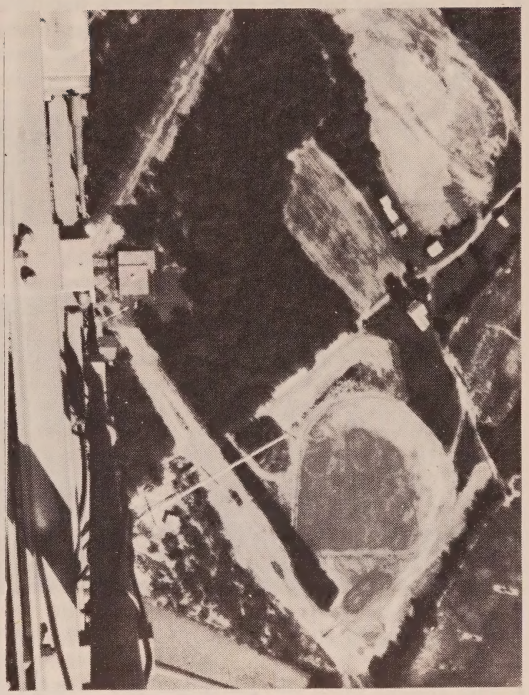
- by Danny Hampton, K4ITL

It will be impossible to write in a single article about all these things. I can assure you that much has been learned about big towers and wide-area repeaters, in the last year (.28/.88 went active on the 'big stick' Sept. 1978). One can spend quite a bit of time dreaming and supposing about what will happen when a wide-area machine finally hits the air. No matter how much time is spent in planning, things end up being surprising and different.

"If you have the opportunity to place a wide-area machine in service, the first thing you must realize is that you will get to use it very little for local use. The .28/.88 machine covers a north-south stretch from the Virginia border to the South Carolina border. Transient mobiles use the machine during the day almost constantly. We do not mind this use, because it provides single-repeater service for the transients and allows them to check on road and gas conditions over a wide area. It is not uncommon to hear two transients chatting for a while before they determine they are 125 to 150 miles apart. Sometimes they question the other guys ability to find his own location on the North Carolina map. After all, repeaters don't cover 150 miles, mobile-to-mobile, at least they never heard of any without some tall mountains around. Usually some local station will give them the location and statistics of the repeater. It is funny to hear their reaction when informing them that one or two dozen people have been monitoring the frequency (they invariably think they are alone). Others users who live in the eighty to ninty mile coverage area may at times abuse the machine. I have heard many times the phrase, 'let's listen for a few seconds to see if anyone wants to use the repeater.' This phrase usually occurs after a thirty-minute conversation has been going on. If no one is heard, another ten to thirty-minute conversation ensues. While some of these users are really trying to be thoughtfull, it probably doesn't occur to them that someone else may want to use the machine, but feels it not

Continued On Page 32

A WHOLE NEW BALL GAME



LOOKING DOWN from the 1,800 foot level of the WRAL-TV 2,000 tower SE of Raleigh, location of the 28-88 WR4AOE repeater. The little white squares in lower left of the picture are houses. Photo Ctsy, Danny, K4ITL.

SUPER TOWERS - SUPER REPEATERS

It had to come. The day TV stations got authorization to build the 2,000 foot tower in North Carolina, was the day we would see 2-meter repeaters mounted on them.

First in the state was the WR4AOE machine in

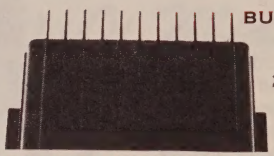
Continued On Page 32

LUNAR

LINEARIZED AMPLIFIERS

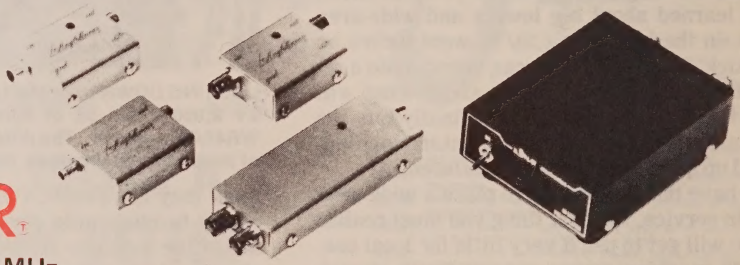
FOR 2 METERS
BUILT-IN RECEIVE PREAMPLIFIER

250 WATTS



INTRODUCING OUR NEW AMP
MODEL 2M10-250P

80 WATTS



LUNAR

28-50-144-220-432 MHz

*One Year Warranty—90 days on Power transistors

LOW NOISE FIGURE RECEIVING PREAMPLIFIERS

F9FT ANTENNAS • 432 YAGIS BY K2RIW • MICROWAVE MODULES • RIW POWER DIVIDERS

MAURY'S VHF-UHF

M. W. "Maury" McMahan (K4GMJ)

253 Providence Square
Greenville, South Carolina 29615

Phone: (803) 288-4671

Specializing in VHF-UHF 50-144-220-432-1296-2304 MHz Amateur Equipment

THE HAMFEST SEASON — STILL GOING STRONG

- by Wayne C. Williams, K4MOB

We concluded our story of visits to hamfests in the last Journal with the Charlotte Metroliner Hamfest. As we look back after 5 months of hamfests for 1979, attendance was up near the beginning of the year, but seems to be dropping as the summer months come along. Perhaps the gasoline crunch has been a contributing factor for some.

Anyway . . . continuing our story of hamfest visits . . . we went to the Raleigh (NC) hamfest in April. It was a nice one, but I estimated the crowds to be slightly smaller than last year. The weather cooperated although we were under a covered parking deck.

May 6th we traveled southward to Gastonia (NC) as they presented their hamfest in a new location, in a large school cafeteria. The area was real nice, comfortable and completely enclosed. There was quite a distance to carry goodies across the lawn from the parking lot, but the Gastonia club had some good helpers for us. I felt the crowd was larger this year that past, although I didn't get to go last year.

The Columbia group held their hamfest on May 12 and 13. Although I was unable to visit the S.C. club's festivities, reports back they had a good time, although indications were that their crowd was down also.

Bleak, threatening weather greeted us the next weekend as we traveled eastward to the Durham (NC) hamfest. In fact we ran through several miles of rain on the way down. Saturdays attendance was down considerable and Sunday didn't prove much better as the weather didn't improve until noon. Overall though, it wasn't bad, perhaps the club would want to promote they are having the event under a covered parking deck in the future, this might improve attendance when the weather doesn't want to cooperate.

Weather was the dooming factor the first Sunday in June as we traveled northward to Manassas, Va. Contrary to advice from everyone about the gas crunch in northern Virginia we boldly set out Saturday for a beautiful drive up highway #29 through Virginia, bright and sunny but cool enough to be comfortable. We were told there was NO gas after 6 p.m. in the area, we fortunately found some just outside Manassas Friday evening about 5:00 p.m. My brother who drove separately from Richmond waited until we checked into the motel before going to gas up. Mike had to wait in line about 30 minutes, but he did get gas. Sunday morning, things were gloomy, overcast skies and forecasts of rain. Nevertheless when we arrived at the fairgrounds, the place was crowded across the field. Our building was quite full with venders setting up. At 10 a.m. it all came crashing down. . . rain, and more rain. When we left at 3:30 it was still raining. Needless to say, the Manassas flea market was ruined, activity in buildings was brisk. The overall crowd was also down in my estimate from previous years. Oh yes, we finally got gas just outside of Charlottesville, Virginia and made it home with almost a quarter tank to spare.

That's about how far we've gone this far . . . still to come this July month for us is the Cary, N.C. swapfest.

The Charleston, S.C. hamfest was held the last weekend of July.

Looking ahead in coming weeks, as you read this . . . on the 12th of August, Concord drops their hat into the ever growing hamfest ring of events. The club members are working hard on this, their first one. Time will tell how it goes over. Sometimes you can predict them, and other times its impossible. We wish them luck anyhow.

August 18 and 19 Fayetteville takes another stab at another successful hamfest. This will be their 3rd move. The club has gotten a facility on the Fort Bragg installation this year. Lots of festivities are planned.

September is "reserved" for Shelby, and it is the only hamfest scheduled in the area that month. The Shelby Radio Club is betting on complete new facilities this year. The hamfest will move from Cedar Park where its been held for many years to the Fairgrounds just outside Shelby. The club told me that they have large exhibition buildings at their disposal and if necessary can house the entire hamfest (flea market and all) indoors or under shelter. Now . . . thats gotta be a lot of shelter, if past experience of size is any indication. Oh yes . . . they promise real plumbing this year (not the portable kind).

Its strange but October seems to be filling up as a hamfest month. Could it be that clubs are tired of fighting hot weather? Anyway we have 4 different hamfest scheduled during the month.

The first weekend is Rock Hill. This "little" hamfest has grown considerable over the past few years. The park where it is held gets fuller each

Continued On Page 34

UTILITIES COMMISSION CHANGES REPEATER CONTROL LINE RATES

Special To The Journal, by Danny Hampton, K4ITL

RALEIGH, N.C. -The North Carolina Utilities Commission in a hearing with Southern Bell Telephone Co., reached a landmark decision in North Carolina July 16, concerning rates to Amateur Repeater control and autopatch telephone lines.

The decision written into the tariff regulations of North Carolina, stated that Amateur use of telephone lines for repeaters and autopatches should be charged at residential rates. Heretofore there were no instructions, as such, and the telephone companies were requiring repeater owners to pay business rates for use of their telephone lines.

The new ruling which takes effect August 17, applies ONLY to Southern Bell in North Carolina. The Utilities Commission, however, has sent a request for change to all other telephone companies in the State. Each company has 30 days to comply or request a hearing in opposition. This will make effective dates for other companies who are willing to comply, near the end of this month. (August) Companies requesting a hearing will probably cause further delays.

Amateur repeater owners are URGED not to contact their telephone companies too soon. Time should be allowed for the new regulations to be filtered down to every office in every city. Waiting to contact them possibly in September could result in less hassle and problems for you.

Several Amateurs over the past years have been fighting with the phone companies trying to get residential rates for their repeater control links. Two previously in North Carolina had been successful.

Mark Sertzer, WA4DYD, of Boone, and Frank Nakamura, WB4ETF of Charlotte had successfully gotten residential rates by certifying that the telephone lines would not be used for business purposes in any form.

K4ITL of Raleigh had tried the same route, unsuccessfully for several years. It was six months ago that Danny decided to take the issue before the North Carolina Utilities Commission.

Danny said it was a giant step forward for Amateur repeater owners in North Carolina, but he warned that any abuse of any type on Autopatch could cause the telephone companies to petition the FCC for change. He said compliance with FCC rules on autopatch usage is a must to prevent the phone companies from balking under these new tariff regulations.

Any repeater owner wishing further information about this new tariff regulation, or any out-of-state Amateurs wishing to get copies of the procedures used with the N.C. Utilities Commission, should write the CVRA Technical Committee Chairman, Danny Hampton, K4ITL. His address and telephone number is on page 2 of the Journal.

Editor's Note: We will try to have a complete story on this vital issue and how it involves repeater owners in other CVRA States next issue. Time was not available to pursue further this issue, since the news broke as the completed Journal was being taken to the printer.

THE CVRA DIRECTOR AND HIS JOB

The By-Laws of the Carolinas-Virginia Repeater Association define a Director:

Section 6 (Directors) . . . "The director is the primary representative of the Association within his district. he is supported by a Vice-Director, three assistant Directors, and other Repeater Representatives or Associate Members appointed to assist in special assignments to adequately cover his district. He maintains contact with all Repeater Representatives in his district and actively solicits leads on individuals or clubs interested in installing a repeater. He also maintains contact with repeaters who may not be members of the Association to minimize conflicts which may arise. He maintains contact with other directors in the districts adjoining his, and also with representatives of other repeater Associations or repeater groups that are not in the Association districts. The Director is a member of the Association's Frequency Coordinating Committee, which is headed by a Chairman appointed by the President. The Director advises the chairman of potential problem areas regarding frequency recommendations. He must therefore be fully knowledgeable of the coverage areas of repeaters in his district and of their future plans. He attends meetings of the board of Directors and serves as the "sounding board" for ideas and problems concerning repeaters and VHF/UHF interests in his district. He actively solicits repeater groups to join the Association and encourages both owners and users to cooperate with the Association in providing a unified voice for the geographical area represented by the Association.

TOP OF THE LINE

Featuring

KENWOOD

ICOM YAESU DenTron

ORDER TOLL FREE!

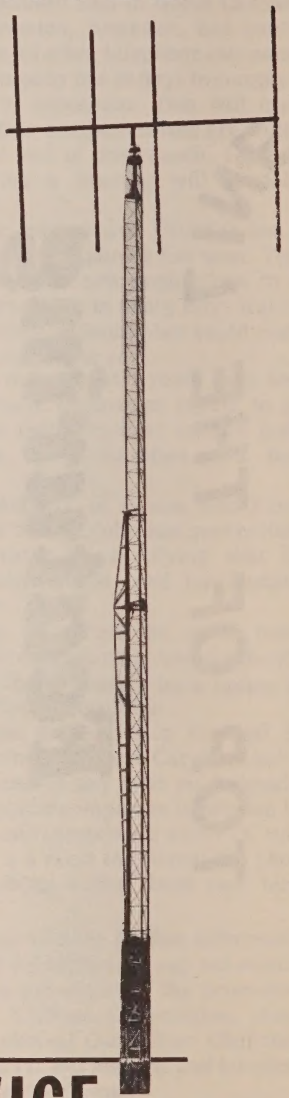
800-845-6183

TEN-TEC,

G.I.S.M.O.
2305 CHERRY ROAD
ROCK HILL, S.C. 29730

73, THE GISMO GANG

ROHN & CONSOLIDATED TOWERS



Utility Poles Installed

Tower and Pole Accessories

Thrust Bearing

Rotor Plates

Guy Wires

Pole Steps

CDR Rotors

Crankup Telescoping Mast
(by consolidated)

WE CAN DO THE JOB FROM START TO FINISH
LET US CHANGE OVER YOUR ANTENNA SYSTEM

WEST ANTENNA SERVICE

HARWOOD WEST WB4RLO
RT 6 BOX 529 - A
GREENSBORO 27405

COVERING TRIAD AREA ONLY
FREE ESTIMATES PHONE
919 - 621 - 9941

POLITICS AND THE CVRA CAN THIS REALLY BE TRUE?

- by Wayne C. Williams, K4MOB

Quite often I hear about the "politics" in the CVRA. Someone from Virginia might say, "Well North Carolina runs the CVRA". Someone from Eastern North Carolina might say, "Well the CVRA is run from Greensboro or Durham". Someone from South Carolina might say, "Well, we're left out down here, nobody cares."

I can't believe people can really think this is true. Lets look at a few things which convince me these statements are completely with no foundation.

All elected offices of the CVRA are begun with a nominating committee. Committee members are equally divided from each District, N.C., S.C. and Va. The committee nominates President, Vice-President, etc. and presents to the board. If there is no more than one nomination, the person is named to the office. If there are several nominations, an election is held by Ballot, in which EVERY member repeater owner get to vote. (See CVRA By-laws, Elections, Section 8,9,10 & 11. Bylaws were included in the February Journal)

In the case of District Director elections, a committee from that State nominates persons to the office. Like officers, if the nominee is unopposed, he is proclaimed Director, if there is a nomination from someone else, then an election is held with ballots with every repeater member.

So you see, the man who runs things in your State or District is the one whom your peers nominated and elected. He is representing you, who put him in office. The Director RUNS the CVRA for your State. If you feel left out, find out why you do.

The voice of the CVRA is obviously the Journal. The Journal Editor is appointed by the President. At present, I am doing the job. I am non-partisan as can be, but I spend more time trying to get information from South Carolina and Virginia than I do North Carolina to even things up. My information is supplied by YOUR Director, his Assistants and other persons in YOUR state. If ever the Journal looks one-sided as far as news coverage is concerned, perhaps someone in your District needs to get to work and provide more coverage for you.

My job as Editor is to pass along information supplied to me by people, from all areas. I do this as much as it is received, sometimes, I have to squeeze it out, but we get it one way or the other. My job isn't a permanent one, I will probably remain at it for some time until someone else comes along who wants to do it. I'm sure the President would consider a new Editor who volunteered and who could do a better job. Until that time, I will continue to be Editor and work as hard as I can to bridge the vast Communications gap which exists. I am not elected, so I don't belong to anyone, I can look at the whole organization with equal value . . . this I try very hard to do.

The Chairman of the Frequency Coordinating committee is another source of what has been termed "politics". I cannot believe this is so, not the way Al Ross is running things. Al will not allow any repeater owner to "bypass" his State Director, he will refer them to the Director. Al maintains his job of being chairman of the committee, and a coordinator between the 3 District Directors, a bank of information from which they can draw. So the Chairman cannot be political this way.

If you are a person who thinks the CVRA is too "political", I hope this story may have convinced you otherwise. If it didn't and you still want to be "convinced", I invite you to write me or call me, or see me at a hamfest and we'll try again.

I just cannot see any basis for anyone in any district feeling they are "left out" or that things are being run from any particular location. This just isn't true.

WANTED

TWO WAY

TECHNICIAN

2ND Class Phone
Experience Necessary
Good Salary
Large Benefits
Stable Company

TWO WAY RADIO

OF CAROLINA

Call - 372-3444
Write P.O. BOX 33776
Charlotte, N. C. 28208

VHF NET REGISTER (Local Times Indicated)

TWO METERS - FM

ANDERSON SC	37/97	WR4AIO	ANDERSON RADIO CLUB NET	DAILY	2130
ASHEVILLE NC	16/76	WR4AEV	YL NET	TUE	2100
ASHEVILLE NC	16/76	WR4AEV	WESTERN NORTH CAROLINA TFC NET	TUE	2030
BENSON NC	87/27	WR4ARL	JOHNSON ARS NET	DAILY	1930
BLUEFIELD VA	4.89/5.49	K8BHG	EAST RIVER RC NET	WED	2030
BURLINGTON NC	07/67	WR4AYO	ALAMANCE COUNTY ARES NET	MF	2100
CATAWBA COUNTY NC	82/82		CATAWBA COUNTY RACES NET	MON	1900
CHARLOTTE NC	34/94	WR4AEU	METROLINA 2-METER EMERG. NET	DAILY	2100
CHERAW SC	735/135	WD4HEH	CHESTERFIELD COUNTY ARS NET	TUE	2030
DANVILLE VA	10/70	WR4BDN	LAST CAPITOL SERVICE NET	TTHSN	2030
DILLON SC	52/52		DILLON CO. ARC NET	MON	1830
DORCHESTER SC	78/18	W4NAT	DORCHESTER AREC/RACES NET	1ST M	
DUBLIN VA	78/18	WB4UQZ	NEW RIVER VALLEY ARC NET	SUN	2100
DURHAM NC	34/94	WR4BEK	TRIANGLE RADIO ALERT NET	DAILY	2030
DURHAM NC	34/94	WR4BEK	POSSUM TROT NET	MF	0630
FAYETTEVILLE NC	31/91	WR4ANN	POSSUM TROT NET	MF	0630
FAYETTEVILLE NC	31/91	WR4ANN	CAPE FEAR ARS NET	DAILY	1900
FLORENCE SC	37/97	WR4AGM	FLORENCE 2-METER NET	MON	2000
FOREST VA	705/105	WB4JBJ	VA. TELETYPE SOC. RTTY NET	MON	2000
GREENSBORO NC	01/61	K4SNI	PIEDMONT TFC. & TRAINING NET	MWF	2030
GREENSBORO NC	16/76	WR4AOD	CVRA INFORMATION NET	WED	2030
GREENSBORO NC	72/12	K4CJZ	GUILFORD COUNTY EMERG. NET	THUR	2100
GREENVILLE NC	52/52		BRIGHTLEAF ARS NET	TUE	2100
GREENVILLE SC	01/61	WR4ADG	BLUE RIDGE ARPSC NET	TUE	2100
GREENWOOD SC	765/165	WR4AUE	ABBEVILLE-GREENWOOD EMERG. NET	TUE	2200
GRIFTON NC	16/76	WR4ABP	ENC EMERGENCY NET	THU	2100
JACKSONVILLE NC	40/00	WD4FVO	ONSLOW ARC NET	WED	2100
LANCASTER SC	10/70	WC4AAW	LANCASTER CO. NET	SUTTH	2030
LAURENS SC	25/85	WA4UZA	LAURENS COUNTY ARES NET	SUN	2030
LAURINBURG NC	025/625	WR4AOX	SAND HILLS EMERGENCY NET	DAILY	1930
LUMBERTON NC	96/36	WR4BDQ	LUMBERTON ARC NET	MF	2030
LYNCHBURG VA	01/61	WR4AXO	LYNCHBURG TWO METER FM NET	TUE	1900
MORGANTON NC	75/15	WR4AQI	W. PIEDMONT VHF NET	WED	2100
MYRTLE BEACH SC	01/61	WR4AXC	GRAND STRAND 2-METER NET	WED	2100
N. AUGUSTA SC	13/73	WR4ABB	STATELINE NET LAST	SUN	2000
ORANGEBURG SC	69/09	WR4AQY	VHF NET	TUE	1900
RALEIGH NC	04/64	WR4ACF	RARS NET	MTTHF	2000
REIDSVILLE NC	25/85	K4YFT	ROCKINGHAM CTY. ARC NET	TUE	2100
ROANOKE VA	385/985	WR4AFY	ROANOKE VALLEY ARC NET	WED	2000
SALISBURY NC	13/73	WR4AAA	CENT. NORTH CAROLINA TFC. NET	DAILY	2200
SUMTER SC	04/64	WR4AOI	SUMTER RPTR. ASSN 2-METER NET	MON	2130
TAZEWELL VA	75/15	WA4QKH	TRI-COUNTY 2-METER NET	SUN	2000
TIDEWATER AREA VA	37/97	WA4KXV	STARES NET (S. TIDEWATER ARES)	M-F	2100
WHITE HALL SC	31/91	WR4AQL	COASTAL ARA 2-METER NET	THU	2100
WINCHESTER VA	22/82	WR4AGT	SHENANDOAH VALLEY SERVICE NET	DAILY	1915
WINSTON-SALEM NC	04/64	WR4ARD	FORSYTHE COUNTY AREC/RACES NET	WED	2100

1½ Meters (220 Mhz) - FM

HILLSBOROUGH NC	2.34/3.94	WB4DBB	PIEDMONT 220 NET	TTH	2100
SAURATOWN MT NC	3.28/4.88	WR4AOW	CVRA INFORMATION NET	WED	2000

TWO METERS - SSB/CW/AM

~~CINCINNATI OH~~	~~145.02~~	MIDWESTERN SSB NET	STTH	2100
GREENSBORO NC	144.25	NORTH CAROLINA S.W.O.T.	TUE	2100
GREENVILLE SC	144.25	SOUTH CAROLINA S.L.O.T.	M-TH	2100
GREENVILLE SC	145.11	S.L.O.T. NET	MWF	2130
WASHINGTON DC	145.10	MID-ATLANTIC 2-METER NET	WED	2100

SIX METERS

CHARLOTTE NC	50.40	CHARLOTTE HORNET NET (AM)	SUN	2100
CLEMSON SC	50.125	DIXIE NET (SSB)	WED	2100
GLENDALE SPGS. NC	50.12	NORTH CAR. 6-METER NET (SSB)	SUN	0900
RICHMOND VA	50.25	CENTRAL VIRGINIA NET (AM)	DAILY	1900

EVERYBODY'S GOING TO:

CAPE FEAR AMATEUR RADIO SOCIETY

3rd ANNUAL

SPONSORED BY: CFARS

SANCTIONED BY: ARRL

HAMFEST

AUGUST 18 & 19 1979

BANQUET - SATURDAY NIGHT $7.25 per person
SWIMMING POOL AVAILABLE TO GUESTS FOR A NOMINAL FEE

MOTELS
Heart of Fayetteville
Bordeaux Motor Inn
Holiday Inn
Howard Johnson
Ramada Inn
KOA Kampground
and many more

FOOD
Available at Fort Bragg, Fayetteville and Spring Lake, and many other places

TALK-IN FREQUENCIES
146.31/91 Fayetteville
147.93/33 Fayetteville
146.52/52 Simplex
3923 SSB

FOR MORE INFORMATION:
Write to:
WA4YMM
P.O. Box 35171
Fayetteville, NC
(Call 919-867-2169 24 hrs.)

****TICKETS - $2 ADVANCE $3 AT DOOR**

EXHIBITORS NO EXTRA CHARGE

≪ CHILDREN UNDER 16 FREE ≫

PRIZES 1st - Kenwood TS-120S 220W SOLID STATE 10-80 MTR SSB XCVR

GALORE

2nd - Mosley Classic 36 Triband Beam

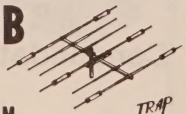
3rd - 2 Mtr hy-gain Handy Talkie

4th - CDC T²X Rotor Motor

PLUS MORE!

PLACE: MAIN OFFICERS CLUB
FT BRAGG, NC

IN THE BEAUTIFUL LAFAYETTE BALLROOM
9,000 SQUARE FEET OF "AIR CONDITIONED SPACE"



Most activities are to be held inside, some space may be available outside. Call early for reservations! This is a family Hamfest, there will be activities for all members of the family, so bring all your family and attend the 3rd annual Cape Fear Amateur Radio Society Hamfest and have a two day real fun affair.

PLEASE SAVE THIS FLYER FOR FUTURE REFERENCE & TELL EVERYBODY, YA HEAR?!! TNX & 73.

BOB'S
AMATEUR RADIO CENTER

WE STOCK WHAT WE ADVERTISE

TEN TEC • DENTRON
AMCOMM • YAESU • SWAN
BIRD • CUSHCRAFT • HUSTLER
HY-GAIN • ASTATC
CDE Rotors • B & W • SHURE
TEMPO • NYE VIKING
ICOM • WILSON
DRAKE • MIRAGE

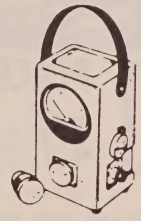
Toll Free
1-800-438-2006

Now Is The Time To Think About That New Tower.
WE CARRY IN STOCK
Consolidated Hot Dip Galvanized

—TOWERS—

WE WILL SHIP ANYWHERE IN THE U.S.A.

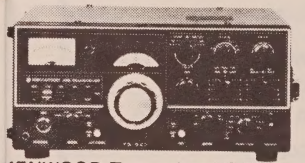
the indispensable
BIRD 43



THRULINE WATTMETER
ELEMENTS
2-30 MHZ
25-1000 MHZ

BOB NEMETH, WD4MKZ

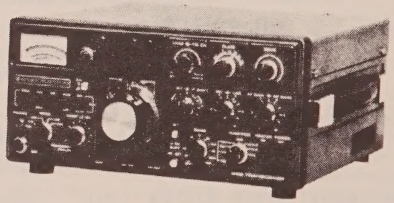
318½ N. Main St., Salisbury, NC 28144
Monday-Saturday 9 a.m.-6 p.m., Wed. 'til 9 p.m.
PHONE 704-636-7959

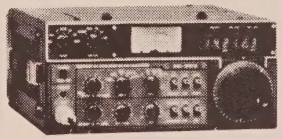


KENWOOD Transceiver TS-520S
160 thru 10M *"Surprise...call us!"*

KENWOOD

Alpha 77DX — One 8877 Tube

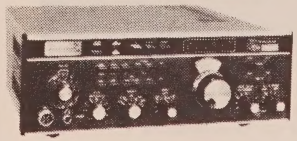


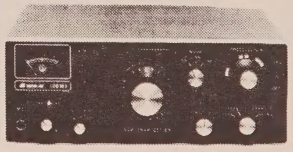


ICOM IC 701S, 160 thru 10M

Alpha 76A
— Two 8874 tubes Hipersil Xfmr.

DRAKE





SWAN

We Also Carry A Complete Line Of ACCESSORIES

ARRL ROANOKE DIVISION CONVENTION

4th ANNUAL TIDEWATER
HAMFEST - FLEA MARKET - COMPUTER SHOW

SATURDAY, OCTOBER 20th & SUNDAY, OCTOBER 21st, 1979
NORFOLK, VIRGINIA

LOCATION: Downtown Norfolk's Cultural and Convention Center
SCOPE

SHOWTIME: 0900 - 1800 SATURDAY AND SUNDAY
EXHIBITS AND FLEA MARKET SET UP - 0700

60,000 Sq.FEET OF AIR CONDITIONED EXHIBIT AND FLEA MARKET AREA

COMPUTER SHOW *- Many Microprocessors Will Be Displayed*

DX, ARRL, AND TECHNICAL PROGRAMS

YL ACTIVITIES AND PROGRAMS
CW AND ***HOME BREW*** CONTESTS

BIG PRIZES SUNDAY - YOU DO *NOT* HAVE TO BE PRESENT TO WIN
HOURLY ***PRIZE*** DRAWINGS - CLEAN UP DRAWINGS END OF DAY
FCC AMATEUR EXAMINATIONS SCHEDULED FOR 0900 - 1200 SATURDAY

FANTASTIC CRUISE AND DINNER DANCE ON THE NEW ***SPIRIT OF NORFOLK*** CRUISESHIP
FESTIVITIES BEGIN WITH A COCKTAIL PARTY (Cash Bar) AT 1800 SATURDAY UNTIL .....
TALK IN STATION *W4NV* - **MONITORING 13/73,19/79,34/94,52 SIMPLEX**

FOR HOTEL RESERVATIONS - CALL: **HOLIDAY INN SCOPE 1-800-238-5400**
OMNI INTERNATIONAL 1-800-241-5500
ADMIRALTY MOTOR HOTEL - (Collect) 804-461-5555

ADVANCE ADMISSION TICKETS $2.50. $3.50 AT THE DOOR
CHILDREN UNDER 12 FREE

(tear here and mail in)

ADVANCE REGISTRATION FORM

TO:
TIDEWATER RADIO CONVENTIONS, INC.
P.O. BOX 7101
PORTSMOUTH, VIRGINIA 23707

FROM: _____
_____
_____

PLEASE RESERVE:

_____ADVANCE GENERAL ADMISSION TICKETS AT $2.50 each $ _____
_____FLEA MARKET SPACES AT $3.00/DAY $ _____
_____COMMERCIAL FLEA MARKET SPACES AT $10.00/DAY, $15.00 FOR BOTH DAYS $ _____
_____TABLES IN EXHIBITION AREA AT $20.00/DAY OR $30.00/BOTH DAYS $ _____
_____SPIRIT OF NORFOLK CRUISE AND DINNER DANCE AT $16.00 each or $30.00 couple $ _____
_____CRUISE ONLY AT $7.50 $ _____

TOTAL $ _____

MAKE CHECK PAYABLE TO TIDEWATER RADIO CONVENTIONS, INC.
ENCLOSE SASE

PLEASE MAKE YOUR RESERVATIONS EARLY !

SOUTH CAROLINA STATE NEWS

JACK WATSON, W4YPD, Director

GREENVILLE/GREER . . . The 223.46-224.06 repeater for that area is now operational. Reports indicate the site is nearing completion on Sasafras Mt. for the new home. The concrete block building has been constructed and the tower base has been poured. A 50 to 70 foot tower is planned. The mountain is one of the higher spots in South Carolina and should provide the 220 repeater with excellent coverage around the area and into North Carolina. (WA4BVW, WA4SSJ)

BILL WALL . . . WA4WND a very active and well known ham across South Carolina died in late June. Bill participated in club activities and other events and had gained the friendship and respect of many hams around the state. Bill succumbed to a massive coronary attack. His position as a sales representative for a Paint Company kept him constantly on the road and in contact with friends across the state. (Bob, K4FRX)

SOUTH CAROLINA AMATEUR RADIO WEEK was proclaimed by Governor Riley the week of June 17-23 (field day weekend). Radio club officers throughout the State were invited by the SCM Richard, W4MTK to attend the proclamation signing ceremony in the governor's office. About 35 hams were in attendance. (K4FRX) (See picture in this Journal)

QCWA NET . . . The Palmetto Chapter QCWA meets 5 p.m. every Saturday on 3925 khz. All QCWA members are invited to join in the rag chew.

ANDERSON . . . Art Driggers, N4JK has the distinction of the only 10-meter reported on the air in CVRA territory. Art, in his CVRA Membership application describes the machine as a Heathkit Apache transmitter, and two separate receivers, converted Cobra and Higain CB rigs. The machine which is amplitude modulated will also pass narrow band FM. It is located on a hill in North Anderson, with links in West Anderson and in Williamston. Assisting Art with the repeater is Howard Wall, WA4ZSO. The machine operating on 29.530-29.630 has 100 watts of power feeding a half-wave verticle. The receivers are linked to the transmitter via 440 mhz. The machine went in full service April 1, 1979. (N4JK)

DILLON . . . According to reports a new repeater is on the air in Dillon. The machine is being operated by Ronald McDowell, WB4EMK on the frequency of 145-745. No further information was available at Journal press time, although it was rumered the machine is either on, or planned to be installed on a 1,500 foot tower. (Editor)

GREENVILLE, TENN . . . The 223.34-224.94 Greenville 220 mhz machine is on the air at a temporary location. The WB4NKM repeater is of VHF Engineering vintage operating through a 5 cavity homebrew duplexer, with a Ringo Ranger Antenna system. The repeater will be ultimately located at the present site of the WR4AHP 10-70 repeater on Camp Creek Bald Mt. on the N.C.-Tenn State line. Larry Broyles is sponsor and trustee of the machine. He has become the 4th Tenn. repeater owner to join the CVRA as a full member for 1979 thus far. Cliff WB4NKL is assisting on the machine. Support is also coming through the Greenville ARC. (CVRA Files)

AMATEUR RADIO WEEK was proclaimed across the State of South Carolina June 17-23. Governor Riley was accompanied by some 35 club officers across the State including ARRL South Carolina SCM Richard McAbee, W4MTK. The proclamation was signed during ceremonies in the Governor's office. (Photo Ctsy Bob, K4FRX, Col. S.C.)

IC-215
2 METER FM
PORTABLE

IT'S BACK BY POPULAR DEMAND

ICOM

SPECIAL!! $209.00
BC-20 Optional

GRAB THE IC215 PORTABLE ICOM

NO OTHER RIG ON THE MARKET LIKE IT!

BC-20
NICAD—CHARGER
SYSTEM—FOR IC215
Only $49.00

ORDER TODAY!
WE CAN SHIP ANYWHERE!

WHEN YOU GET IT...
YOU GOT IT!

STOCKING CRYSTALS FOR ALL REPEATERS FOR YOUR ICOM

WILLIAMS RADIO SALES

NORTH CAROLINA
WAYNE C. WILLIAMS K4MOB
RT. 1, BOX 806, COLFAX, N. C. 27235
PHONE (919) 993-5881 AFT. 5 P.M. AND WEEKENDS

"The Crystal Company"

NORTH CAROLINA STATE NEWS

KEN WOODARD, WA4BVW, Director

WINSTON-SALEM . . . The Forsyth County Amateur Radio Emergency Society no longer has a distinctive name - FCARES. Northwestern Financial Inventors, a real estate investment organization headquartered in Charlotte has changed its name to First Carolina Investors. They will trade on the stock exchange with . . . you guessed it . . . FCARES. (K4MOB)

UNION CROSS . . . The Kernersville repeater, 915-315 finally moved to their preferred site at the old radar installation at Union Cross, SE of Winston-Salem. The repeater owned by a group of Winston area amateurs is reported with improved coverage at the new location and good mobile coverage exceeding the triad area of Winston, Greensboro and High Point. (K4QDM, Ray)

HIGH POINT . . . The K4AZA 40-00 repeater is now back on the air. The complete new machine has all the latest gadgets on it. This machine on 2-meters re-joins the 220 mhz machine at the 150-foot tower at the home of F.L., K4AZA.

DURHAM . . . The Journal has received reports that the 147.98-147.38 machine operated by Bill, K4RUQ in Durham was completely wiped out recently by lightning. As of press time there was no word as to whether Bill plans to get the machine back on, or get out of the repeater business. (K4MOB)

SAURATOWN MT . . . The AB4X 144.61-145.21 machine has been sold to a group of hams in the Virginia western mountain area. Plans are for the machine to be put on the air in Virginia on the same frequency in the future.

MORGANTON . . . The large group of 220 mhz. Amateurs in the Morganton area now have their repeater. The new 223.36-224.96 machine is on at a temporary location for debugging and testing until it can be moved to its permanent site. The machine should fill in good coverage on 220 mhz. between Sauratown Mt. to the East and Pisgah to the West which each have high coverage 220 repeaters. (WA4BVW)

ROBBINSVILLE . . . The Joanna Bald 735-135 repeater is changing frequencies to 146.445-147.045. The high coverage machine reportedly had been causing interference by users into the Oak Ridge (Tenn.) 72-12 repeater. Apparently the groups were able to work out the situation together. (WA4BVW, K4ARO)

WAYNESVILLE . . . The Haywood County repeater N4SM 87-27 is still in the process of being moved. It is presently being operated in a temporary location near Waynesville. The new location should greatly increase coverage of the machine.

GREENSBORO . . . Another super repeater is in the making near Greensboro. The 19-79 High Point machine has been sold to four hams in the Greensboro area, and temporarily moved to the Channel 2 TV tower in Greensboro. In mid October, the repeater should be placed at the 1800 ft. level of a new "super tower" being constructed by Channel 2 at Level Cross. More information on this interesting situation next issue. (K4MOB, tnx Lee, W4RPC)

GREENSBORO . . . Frank Wyatt, N4AZM reports his new repeater in the Sedgefield section of Greensboro on the air operating well experimentally. The machine at his home is presently on 90-30, but crystals have been ordered for 144.66-145.26 and the repeater will be moved to the new frequency soon. Frank said he intends to raise the antennas on the machine also to provide better coverage in the future. (Tnx N4AZM)

OBJECTIVE OF THE CVRA

The Carolinas-Virginia Repeater Association is an organization of Amateur Radio Repeater owners, operators and users who have banded together to:

a. Serve as a coordinating body for VHF/UHF repeater and simplex frequencies.
b. Promote the exchange of information concerning repeater installations and operation.
c. offer guidance and assistance in establishing repeaters.
d. Provide a unified voice for FM and repeater interests in the State of North Carolina, South Carolina and Virginia.
e. Advance the general interest and welfare of amateur radio as a public service.

Organized in March 1971, the Association has become the leader of FM interests in our three state area.

The organization has no enforcement powers and can only recommend frequencies. The only penalties for neglecting to advise the CVRA of your present operation, or for neglecting to obtain or disregarding recommendations for your future operation, is the possible interference from other groups which may reduce the effectiveness and enjoyment of your system, and of your neighbors.

CONVENTION & HAMFEST

Fourth Annual Tidewater HAMFEST-COMPUTER SHOW-FLEA MARKET will be held in the Norfolk, Va. Cultural and Convention Center SCOPE October 20 and 21, 1979. 60,000 square feet of airconditioned exhibit and Flea Market tailgating space are available. Doors open at 9:00 AM. ARRL meetings, DX, Traffix forums, plus a CW contest are scheduled. FCC Exams are planned for amateur upgrading Saturday 9-12 AM. A special feature will be a dinner cruise and banquet on the Spirit of Norfolk Cruiseship Saturday night. Tickets and information - Tidewater Radio Convention, P.O. Box 7101, Portsmouth, Va. 23707

BRIARPATCH ARC OFFICERS

The Briarpatch ARC, with a total of 76 members is active in the southwestern part of Virginia. The club operates two repeaters, one on Briarpatch Mt. (69-09) and the other in Galax (34-94).

Officers for the club are: Dave Newman, N4AKX, president; Glen Diamond, Jr., N4VL, vice-president; Patricia Berry, WD4BXV, secretary and Hersay Shumate K4QFQ, treasurer. Trustee of the repeater is Roy R. Wright, K4AXQ.

QCWA CHAPTER IN LYNCHBURG

A Lynchburg, Va. chapter of the Quarter Century Wireless Association was accepted recently by the national organization of the QCWA.

Temporary officers of the Lynchburg chapter are John Bush, W4FOD, president, and George Rulffs, Jr. AA4GR, secretary-treasurer.

Next meeting of the chapter will be held September 15. All QCWA members in central Virginia area are invited to attend.

QCWA membership requires an applicant to have been licensed for at least 25 years. Applications for membership may be obtained from George Rulffs AA4GR, 4420 Montgomery Rd., Lynchburg, Va. 24503. (Tnx, LARC Bulletin, Lynchburg ARC)

VIRGINIA STATE NEWS

CARTER COGLE, K4ARO, Director

CHESAPEAKE . . . The 19-79 machine was out of service for a short while during the first part of July to allow owners time to move from a water tank on Indian River Road to a new location, another water tank on the Oake Grove Road. Karl, WA4SBC said he didn't expect any changes in coverage or range after the change, the move was just a planned updating change to the GE Master repeater. (Wally, WA4KXV)

GALAX . . . Buford, WA4DFH reports the new repeater planned to replace the old 34-94 machine in Galax is nearing completion. They are waiting for crystals and the amplifier. The new machine to operate on the CVRA coordinated frequency of 144.53-145.13 will be located atop the Twin County Community Hospital building. The machine sponsored by the Briarpatch ARC should be on by mid September and will be used as the local Civil Preparedness repeater. The 69-09 machine located on Briarpatch Mt. will be unaffected by the new machine, but the 34-94 will get off the air permanently. (K4ARO, WA4DFH)

BLAND . . . Tom Malloy, N4AZJ reports his 144.75-145.35 repeater is now on the air. The MICOR (Motorola) machine is using two antennas until the duplexer arrives. Coverage extends to Radford, Roanoke, Petersburg, Galax, Wytheville, Floyd and Princeton, W. Va.

CULPEPPER . . . The 72-12 WR4BCS repeater has been moved to a new mountain location and is now providing excellent coverage throughout the area.

CRIMORA . . . The Crimora 675-075 repeater is now on the air. Dec, W4PNT reports that they are looking for a better site for the new machine to provide better coverage. Meanwhile the machine is operating well throughout the Crimora area.

PETERSBURG . . . Sam, WA4QWT will be leving Petersburg in September. At that time, the K4SII 75-15 repeater will be moved to 78-18 which Sam will be relinquishing. As of now the 75-15 machine has been moved from Ettrick to Petersburg. When the K4SII repeater is moved to 78-18, W4LGG will be using the abandoned frequency of 75-15 for a RTTY repeater in the area. (K4ARO)

RICHMOND . . . The Richmond ARC, operators of the 34-94 machine are installing equipment at the office of Emergency Services headquarters to facilitate use of repeater during emergencies. On the repeater, information tapes are available by proper I.D. and 7-7-7 on the touchtone pad. (Jim, K4OJE)

GUM SPRINGS . . . The 87-27 Gums Springs operators 24 hours per day. Glen Duke, KB4GX reports a new duplex harness has been installed. A new Spectrum solid state receiver is due in any time and will be installed on the machine. (K4OJE)

DISTRIBUTION OF REPEATERS BY FREQUENCY

AUGUST 1979

FREQUENCY LISTINGS FOR
NORTH CAROLINA
SOUTH CAROLINA
VIRGINIA

TWO METERS

4.53 /5.13	GALAX	VA
4.55 /5.15	MORGANTON	NC
4.61 /5.21	GASTON	SC
4.66 /5.26	GREENSBORO	NC
4.73 /5.33	MT AIRY	NC
4.75 /5.35	BLAND	VA
4.79 /5.39	SAURATOWN MT	NC
4.83 /5.43	ALEXANDRIA	VA
	GALAX	VA
4.87 /5.47	LILLINGTON	NC
4.89 /5.49	BLUEFIELD (WVA)	VA
6.01 /6.61	GREENSBORO	NC
	NEW BERN	NC
	GREENVILLE	SC
	MYRTLE BEACH	SC
	BRUMLEY MT	VA
	LYNCHBURG	VA
6.025/6.625	LAURINBURG	NC
	HARRISONBURG	VA
	NEW MARKET	VA
6.04 /6.64	HENDERSONVILLE	NC
	RALEIGH	NC
	WINSTON-SALEM	NC
	SUMTER	SC
	RICHMOND	VA
6.055/6.655	CONCORD/KANNAP.	NC
	ALEXANDRIA	VA
6.07 /6.67	BURLINGTON	NC
	FOREST CITY	NC
	BARREN SPRINGS	VA
	WILLIAMSBURG	VA
6.085/6.685	GRIFTON	NC
	STATESVILLE	NC
6.10 /6.70	CHARLESTON	SC
	GREENVILLE	SC
	LANCASTER	SC
	DAN/WHT.OAK MT	VA
	HIGHLAND SPRNGS	VA
	NORFOLK	VA
6.115/6.715	SPRING LAKE	NC
	HERNDON	VA
6.13 /6.73	KNOXVILLE(TN)	NC
	SALISBURY	NC
	WILMINGTON	NC
	N. AUGUSTA	SC
	HAMPTON	VA
6.145/6.745	DILLON	SC
6.16 /6.76	ASHVL/MT PISGAH	NC
	GREENSBORO	NC
	GRIFTON	NC
	CHARLESTON	SC
	COLUMBIA	SC
	CHARLOTTESVILLE	VA
	EAST RIVER MTN	VA
	FOREST	VA
6.175/6.775	ELIZABETHTOWN	NC
6.19 /6.79	GREENSBORO	NC
	HIGH POINT	NC
	JOHNSON CTY(TN)	NC
	CHARLESTON	SC
	TOCCOA (GA)	SC
	CHESAPEAKE	VA
	FAIRFAX	VA
6.205/6.805	GASTONIA	NC
6.22 /6.82	DURHAM	NC
	ROARING GAP	NC
	WILMINGTON	NC
	GREENVILLE	SC
	COVINGTON	VA
	WINCHESTER	VA
6.235/6.835	WADESBORO	NC
6.25 /6.85	HICKORY/BRT. MT	NC
	REIDSVILLE	NC
	SEVEN SPRINGS	NC
	FLORENCE	SC
	LAURENS	SC
	SUMMERVILLE	SC
	PORTSMOUTH	VA
6.265/6.865	HIGH POINT	NC
6.28 /6.88	RALEIGH	NC
	SHELBY	NC
	COLUMBIA	SC
	SAVANNAH (GA)	SC
	RICHMOND	VA
	ROANOKE/SALEM	VA
6.295/6.895	WILLIAMSTON	NC
6.31 /6.91	AHOSKIE	NC
	ASHEVILLE	NC
	FAYETTEVILLE	NC
	LEXINGTON	NC
	WHITE HALL	SC
	BLACKSBURG	VA
	FARMVILLE	VA
	ROANOKE	VA
	TYSONS CORNER	VA
6.325/6.925	DANVILLE(DCC)	VA
6.34 /6.94	ASHEVILLE	NC
	BURGAW	NC
	CHARLOTTE	NC
	DURHAM	NC
	MANTEO	NC
	CHARLESTON	SC
	COLUMBIA	SC
	GREER	SC
	GALAX	VA
	HAMPTON	VA
	LYNCHBURG	VA
	RICHMOND	VA
	ROANOKE	VA
6.355/6.955	ROCKINGHAM	NC
6.37 /6.97	KINGS MTN	NC
	MT AIRY	NC
	SMITHFIELD	NC
	ANDERSON	SC
	FLORENCE	SC
	SAVANNAH (GA)	SC
	MANASSAS	VA
	STAUNTON	VA
	VIRGINIA BEACH	VA
6.385/6.985	ALBEMARLE	NC
	ROANOKE	VA
6.40 /7.00	HIGH POINT	NC
	JACKSONVILLE	NC
	MARION	SC
	PICKENS	SC
	SUFFOLK	VA
6.43 /7.03	ERWIN	NC
	ROCK HILL	SC
	BLACKSBURG	VA
6.445/7.045	ROBBINSVILLE	NC
6.46 /7.06	CHARLOTTE	NC
	ELIZABETH CITY	NC
	SOUTH BOSTON	VA
6.475/7.075	BURLINGTON	NC
7.015/6.415	BLUEFIELD	VA
7.255/6.835	COLUMBIA	SC
7.30 /7.90	MONROE	NC
7.38 /7.98	DURHAM	NC
7.615/6.015	SUMTER	SC
	FREDRICKSBURG	VA
7.63 /7.03	GREENSBORO	NC
	ROANOKE RAPIDS	NC
7.66 /7.06	MACO	NC
	SUMTER/SHAW	SC
	RICHMOND	VA
7.675/7.075	GREENVILLE	SC
	CRIMORA	VA
7.69 /7.09	GREENVILLE	NC
	ORANGEBURG	SC
	SPARTANBURG	SC
	BRIARPATCH MT	VA
7.705/7.105	MARION	NC
	JOHNSN MT/FRST	VA
7.72 /7.12	GASTONIA	NC
	GREENSBORO	NC
	ROCKY MOUNT	NC
	ALEXANDRIA	VA
	CULPEPPER	VA
7.735/7.135	CHERAW	SC
7.75 /7.15	MORGANTON	NC
	RALEIGH	NC
	PETERSBURG	VA
	TAZEWELL	VA
7.765/7.165	GREENWOOD	SC
	WARRENTON	VA
7.78 /7.18	MT AIRY	NC
	SANFORD	NC
	DORCHESTER	SC
	FT MILL	SC
	DUBLIN	VA
	PETERSBURG	VA
7.795/7.195	LAKE TOXAWAY	NC
7.81 /7.21	GREENSBORO	NC
	LITTLE MT	SC
	MCLEAN	VA
	RUSTBURG	VA
7.825/7.225	HILLSBOROUGH	NC
7.84 /7.24	EDEN	NC
	FRANKLIN	NC
	PINE BLUFF	NC
	SHELBY	NC
	COLUMBIA	SC
	LYNCHBURG	VA
	PETERSBURG	VA
	WOODBRIDGE	VA
7.855/7.255	ASHEBORO	NC
	SHENANDOAH	VA
7.87 /7.27	BENSON	NC
	GASTONIA	NC
	JOHNSON CTY(TN)	NC
	WAYNESVILLE	NC
	CHARLESTON	SC
	LONG MT	SC
	GUM SPRING	VA
7.885/7.285	MARTINSVILLE	VA
7.90 /7.30	JACKSONVILLE	NC
	SYLVA	NC
	BERRYVILLE	VA
	FRANKLIN	VA
	GRUNDY	VA
7.915/7.315	UNION CROSS	NC
	ALEXANDRIA	VA
7.93 /7.33	FAYETTEVILLE	NC
	LENOIR	NC
	COLUMBIA	SC
	N. AUGUSTA	SC
	COLE MT	VA
	KLMNRK/SALUDA	VA
7.945/7.345	SHELBY	NC
	DANVILLE	VA
7.96 /7.36	BOONE	NC
	LUMBERTON	NC
	EDMUND	SC
7.975/7.375	BURNSVILLE	NC
7.99 /7.39	CHARLOTTE	NC
	EDENTON	NC
	PETERSBURG	VA

NORTH CAROLINA REPEATERS

TWO METERS

AHOSKIE	WR4AFB	146.31	146.91	N	PA
ALBEMARLE	WR4BBX	146.385	146.985		
ASHEBORO	WR4AOE	147.855	147.255		PA
ASHEVILLE	WB4DRN	146.31	146.91	N	A
ASHEVILLE	WA4QCO	146.34	146.94	N	
ASHVL/MT PISGAH	WR4AEV	146.16	146.76		
BENSON	WR4ARL	147.87	147.27		PA
BOONE	WR4ATQ	147.96	147.36		PA
BURGAW	K4LZY	146.34	146.94		
BURLINGTON	WR4AYO	146.07	146.67	N	A
BURLINGTON	W4VGZ	146.475	147.075		EA
BURNSVILLE	WA4LLR	147.975	147.375	N	
CHARLOTTE	WR4AEU	146.34	146.94		A
CHARLOTTE	WR4ALO	146.46	147.06	N	A
CHARLOTTE	WR4AWQ	147.99	147.39	N	
CONCORD/KANNAP.	K4CEB	146.055	146.655		A
DURHAM	WA4WTX	146.22	146.82		
DURHAM	WR4BEK	146.34	146.94		A
DURHAM	WR4AJY	147.38	147.98	N	O
EDEN	WR4AZX	147.84	147.24	N	
EDENTON	WA4JOK	147.99	147.39	N	C
ELIZABETH CITY	WA4VTX	146.46	147.06		A
ELIZABETHTOWN	W4DCD	146.175	146.775	N	P
ERWIN	WR4ALY	146.43	147.03	N	
FAYETTEVILLE	WR4ANN	146.31	146.91		A
FAYETTEVILLE	W4LPL	147.93	147.33		
FOREST CITY	WR4AHA	146.07	146.67	N	A
FRANKLIN	WR4ALD	147.84	147.24	N	
GASTONIA	K4ZFD	146.205	146.805	N	L
GASTONIA	WR4ATP	147.72	147.12	N	A
GASTONIA	WD4KGM	147.87	147.27	N	
GREENSBORO	N4AZM	144.66	145.26	N	
GREENSBORO	K4SNI	146.01	146.61		A
GREENSBORO	WR4AOD	146.16	146.76		
GREENSBORO	K4VUW	146.19	146.79	N	
GREENSBORO	WD4IPZ	147.63	147.03		A
GREENSBORO	K4CJZ	147.72	147.12		EA
GREENSBORO	WR4ANL	147.81	147.21	N	
GREENVILLE	W4GDF	147.69	147.09		A
GRIFTON	W4NBR	146.085	146.685		C
GRIFTON	WR4ABP	146.16	146.76		
HENDERSONVILLE	WR4ALC	146.04	146.64	N	
HICKORY/BRT. MT	WR4ACM	146.25	146.85		
HIGH POINT	WR4AFV	146.19	146.79		
HIGH POINT	WD4EMX	146.265	146.865		P
HIGH POINT	K4AZA	146.40	147.00		PA
HILLSBOROUGH	WA4WTX	147.825	147.225		PA
JACKSONVILLE	WD4FVO	146.40	147.00		A
JACKSONVILLE	WR4ATW	147.90	147.30		
JOHNSON CTY(TN)	WR4AIP	146.19	146.79		
JOHNSON CTY(TN)	WA4DIU	147.87	147.27		A
KINGS MTN	WR4AYN	146.37	146.97		
KNOXVILLE(TN)	WR4APU	146.13	146.73		
LAKE TOXAWAY	WR4AGH	147.795	147.195	N	
LAURINBURG	WR4AOX	146.025	146.625		
LENOIR	WR4ARG	147.93	147.33		
LEXINGTON	WR4BDA	146.31	146.91		PA
LILLINGTON	WA4FKI	144.87	145.47	N	
LUMBERTON	WR4BDQ	147.96	147.36	N	A
MACO	K4OVA	147.66	147.06		
MANTEO	WR4AKB	146.34	146.94		PA
MARION	WR4BBN	147.705	147.105		A
MONROE	K4BGU	147.30	147.90	N	
MORGANTON	WB4UDS	144.55	145.15	N	P
MORGANTON	WR4AQI	147.75	147.15		
MT AIRY	AA4RW	144.73	145.33		
MT AIRY	WB4UJH	146.37	146.97		
MT AIRY	WA4CQK	147.78	147.18	N	
NEW BERN	WD4JMS	146.01	146.61		A
PINE BLUFF	WR4BAR	147.84	147.24	N	
RALEIGH	WR4ACF	146.04	146.64	N	
RALEIGH	WR4AOE	146.28	146.88		
RALEIGH	WR4AOE	147.75	147.15		PA
REIDSVILLE	K4YFT	146.25	146.85		
ROANOKE RAPIDS	K4PUV	147.63	147.03		
ROARING GAP	WB4PZA	146.22	146.82		
ROBBINSVILLE	WR4BAN	146.445	147.045		
ROCKINGHAM	WB4DZO	146.355	146.955	N	C
ROCKY MOUNT	WD4HIG	147.72	147.12		A
SALISBURY	WR4AAA	146.13	146.73		
SANFORD	WB4EJJ	147.78	147.18	N	A
SAURATOWN MT	WB4SNA	144.79	145.39	N	CL
SEVEN SPRINGS	WR4AEF	146.25	146.85		A
SHELBY	WR4ABF	146.28	146.88		
SHELBY	WR4AWU	147.84	147.24	N	
SHELBY	WR4ABF	147.945	147.345		A
SMITHFIELD	WR4BBO	146.37	146.97		
SPRING LAKE	WR4BCA	146.115	146.715	N	
STATESVILLE	WR4AZS	146.085	146.685		
SYLVA	KA4V	147.90	147.30		
UNION CROSS	WB4RGV	147.915	147.315	N	
WADESBORO	W4USH	146.235	146.835	N	
WAYNESVILLE	N4SM	147.87	147.27		PA
WILLIAMSTON	WA4TKJ	146.295	146.895		P
WILMINGTON	WR4AVF	146.13	146.73		
WILMINGTON	WR4AHL	146.22	146.82		
WINSTON-SALEM	WR4ARD	146.04	146.64		A

SIX METERS

CARY	WR4AVP	52.35	53.35	N	
CHARLOTTE	WA4TPZ	52.07	53.07	N	P
HICKORY	WR4ACM	52.47	53.47		
HILLSBOROUGH	WB4DBB	52.15	53.15		L
RALEIGH	WR4AOE	52.05	53.05		
RALEIGH	WA4PEN	52.25	53.25		C
ROBBINSVILLE	WR4BAN	52.15	53.15		

220 MHZ

ASHVL/MT PISGAH	WR4AEV	222.34	223.94		
FAYETTEVILLE	WR4ADK	222.42	224.02		
GIBSONVILLE	WA4YGD	223.22	224.82		
GREENVILLE(TN)	WB4NKM	222.34	224.94		
HICKORY	WR4ACM	222.42	224.02		
HIGH POINT	K4AZA	222.32	223.92		A
HILLSBOROUGH	WB4DBB	222.34	223.94		
HILLSBOROUGH	WB4DBB	222.50	224.10		L
HILLSBOROUGH	WB4DBB	223.34	224.94		P
LOCUST	WR4BBA	222.40	224.00		
MORGANTON	WB4PML	223.36	224.96	N	
RALEIGH	WA4PEN	223.04	224.64		
SALISBURY	WR4AAA	223.16	224.76		
SAURATOWN MT	WR4AOW	223.28	224.88		
STATESVILLE	WR4	222.70	224.30	N	P
SYLVA	KA4V	223.34	224.94		C
WINSTON-SALEM	WR4ARD	223.10	224.70		R

450 MHZ

ASHEVILLE	WR4ALE	449.90	444.90	N	
CHARLOTTE	WR4ALO	449.85	444.85	N	
CONCORD/KANNAP.	WA4UPO	449.65	444.65	N	C
DENVER	WR4	447.75	443.75	N	P
DURHAM	WR4	449.00	444.00	N	P
HIGH POINT	WR4ADR	447.90	442.90		
HILLSBOROUGH	WA4WTX	449.10	444.10		PA
HILLSBOROUGH	WB4DBB	449.35	444.35		
LEXINGTON	WR4	448.31	443.31	N	P
LILLINGTON	WR4	448.10	443.10	N	P
SALISBURY	WR4AAA	449.70	444.70		P

VIRGINIA REPEATERS

TWO METERS

ALEXANDRIA	W8LMB	144.83	145.43	M	
ALEXANDRIA	WR4AXB	146.055	146.665	M	
ALEXANDRIA	W4HFH	147.72	147.12	M	
ALEXANDRIA	WR4ATZ	147.915	147.315	M	
BARREN SPRINGS	WR4AFQ	146.07	146.67		
BERRYVILLE	WR4APE	147.90	147.30	M	
BLACKSBURG	WR4AXT	146.31	146.91	N	C
BLACKSBURG	WA4YRJ	146.43	147.03		
BLAND	N4AZJ	144.75	145.35	N	
BLUEFIELD	WD8OGY	147.015	146.415	N	
BLUEFIELD (WVA)	K8BHG	144.89	145.49	N	
BRIARPATCH MT	WR4AHR	147.69	147.09	N	L
BRUMLEY MT	WR4ATJ	146.01	146.61	N	
CHARLOTTESVILLE	WR4ATL	146.16	146.76		
CHESAPEAKE	WR4ACN	146.19	146.79		
COLE MT	WR4BCI	147.93	147.33	N	
COVINGTON	WA4HTI	146.22	146.82		
CRIMORA	W4NPT	147.675	147.075	N	
CULPEPPER	WR4BCS	147.72	147.12	M	
DAN/WHT.OAK MT	WR4BDN	146.10	146.70		
DANVILLE	WR4AHG	147.945	147.345	N	
DANVILLE(DCC)	WB4GJG	146.325	146.925		
DUBLIN	WB4UQZ	147.78	147.18		
EAST RIVER MTN	WR4AXS	146.16	146.76		A
FAIRFAX	WR4AAD	146.19	146.79	M	PA
FARMVILLE	WR4ASW	146.31	146.91		
FOREST	WR4ADY	146.16	146.76		A
FRANKLIN	K4SPS	147.90	147.30		PA
FREDRICKSBURG	N4QD	147.615	147.015	N	P
GALAX	WR4AHR	114.53	145.13	N	P
GALAX	WA4ZIV	144.83	145.43	N	P
GALAX	WR4AHR	146.34	146.94	N	C
GRUNDY	WR4	147.90	147.30	N	A
GUM SPRING	WR4BBI	147.87	147.27	N	
HAMPTON	WR4ALW	146.13	146.73		
HAMPTON	WR4AFT	146.34	146.94	N	T
HARRISONBURG	WR4ATG	146.025	146.625	N	
HERNDON	WA4TXE	146.115	146.715	M	P
HIGHLAND SPRNGS	W4TJF	146.10	146.70	N	C
JOHNSN MT/FRST	WR4JBJ	147.705	147.105		R
KLMNRK/SALUDA	WA4UAF	147.93	147.33		
LYNCHBURG	WR4AXO	146.01	146.61		
LYNCHBURG	WB4MBO	146.34	146.94	N	
LYNCHBURG	WD4EXH	147.84	147.24	N	
MANASSAS	WB4HHN	146.37	146.97	N	T
MARTINSVILLE	WB4HAD	147.885	147.285	N	
MCLEAN	WR4APC	147.81	147.21	M	R
NEW MARKET	WR4ATG	146.025	146.625	M	
NORFOLK	WR4ANT	146.10	146.70	N	
PETERSBURG	K4SII	147.75	147.15	N	P
PETERSBURG	WR4BDX	147.78	147.18		A
PETERSBURG	WR4BBU	147.84	147.24		
PETERSBURG	W4LGG	147.99	147.39		PA
PORTSMOUTH	K4LMY	146.25	146.85	N	
RICHMOND	WB4QEY	146.04	146.64		
RICHMOND	WR4BBZ	146.28	146.88	N	PA
RICHMOND	WR4ADI	146.34	146.94		T
RICHMOND	WA4DMO	147.66	147.06	N	P
ROANOKE	WD4GOE	146.31	146.91	N	
ROANOKE	WR4AHT	146.34	146.94	N	
ROANOKE	WR4AFY	146.385	146.985	N	
ROANOKE/SALEM	WR4AFE	146.28	146.88	N	L
RUSTBURG	WD4EXH	147.81	147.21	N	P
SHENANDOAH	WB4DAK	147.855	147.255	N	P
SOUTH BOSTON	WR4AYU	146.46	147.06	N	
STAUNTON	WR4ACL	146.37	147.97	N	
SUFFOLK	WR4AKS	146.40	147.00		PA
TAZEWELL	WA4QKH	147.75	147.15		
TYSONS CORNER	K4VYN	146.31	146.91	M	PA
VIRGINIA BEACH	WA4KXV	146.37	146.97		EA
WARRENTON	WB4FJT	147.765	147.165	N	P
WILLIAMSBURG	W4NTG	146.07	146.67	N	
WINCHESTER	W4RKC	146.22	146.82		
WOODBRIDGE	WR4AII	147.84	147.24	M	A

6 METERS

ABINGTON	WR4ATJ	52.01	53.01	N	L
ALEXANDRIA	WR4ANC	52.13	53.13	M	C
CHARLOTTESVILLE	WR4AYG	52.76	53.525	N	
CHRISTIANSBURG	K4AUG	52.03	53.03	N	P
DANVILLE	WB4GJG	52.13	53.13		P
LEXINGTON	WR4BCI	52.01	53.01	N	
NORFOLK	WR4ATK	53.525	52.525		
TAZEWELL	WA4QKH	52.05	53.05	N	P

220 MHZ

GALAX	WA4DFH	222.74	224.34	N	P
TYSONS CORNER	K4GCM	222.34	223.94	N	

450 MHZ

ALEXANDRIA	WR4AAG	439.25	427.25	M	V
ALEXANDRIA	WR4ANC	449.60	444.60	M	
ANNANDALE	WR4AQG	444.85	449.85	M	
CHARLOTTESVILLE	WR4AYG	444.25	449.25	N	
CHESAPEAKE	WR4	449.95	444.95	N	P
COLE MTN	WR4BCI	449.05	444.05	N	P
FALLS CHURCH	WB8CRK	449.45	444.45	M	
FT. BELVOIR	WR4ATJ	444.125	449.125	N	
LYNCHBURG	WB4IUS	449.50	444.50		T
PARIS	WR4ANJ	444.80	449.80	N	
PETERSBURG	WR4BBU	449.50	444.50	N	P
RICHMOND	WA4ONG	449.85	444.85	N	P
ROANOKE	WR4AFY	442.50	447.50	N	L
TAZEWELL	WA4QKH	448.90	443.90		P
TYSONS CORNER	WB6GUS	443.50	448.50	M	P
TYSONS CORNER	K4LHB	444.75	449.75	M	
WAYNESBORO	W4BLD	449.05	333.05	N	
WOODBRIDGE	WR4AII	444.90	449.90	M	

SOUTH CAROLINA REPEATERS

220 MHZ

COLUMBIA	WB4URY	222.30	223.90		
GREENVILLE	W4FHJ	222.46	224.06		
GREER	W4ILY	222.38	223.98	N	PA
SUMTER	WR4AUS	222.34	223.94	N	C

450 MHZ

ANDERSON	N4JK	439.25	427.25		C
CHARLESTON	N4SC	449.10	444.509		T
SUMMERVILLE	WR4	449.00	444.00	N	P

6 METERS

COLUMBIA	WR4	52.05	53.05	N	

10 METERS

ANDERSON	N4JK	29.53	29.63		

REPEATER SYMBOLS

N	NON Member CVRA	L	Linked
A	Autopatch	C	Under Construction
PA	Private Autopatch	P	Proposed Repeater
EA	Emergency Autopatch	O	Off Air Temporarily
T	Tone Access	V	Television
M	T-MARC Repeater	R	RTTY

SOUTH CAROLINA REPEATERS

TWO METERS

ANDERSON	WR4AIO	146.37	146.97		PA
CHARLESTON	WR4	146.10	146.70	N	P
CHARLESTON	K4ILT	146.16	146.76		A
CHARLESTON	K4ESG	146.19	146.79	N	C
CHARLESTON	N4SC	146.34	146.94		T
CHARLESTON	WR4BCP	147.87	147.27	N	A
CHERAW	WD4HEH	147.735	147.135		
COLUMBIA	WR4AYE	146.16	146.76		
COLUMBIA	K4AVU	146.28	146.88	N	
COLUMBIA	WR4ACD	146.34	146.94	N	
COLUMBIA	WR4	147.255	146.835	N	
COLUMBIA	WR4AYE	147.84	147.24		
COLUMBIA	WB4VLY	147.93	147.33		
DILLON	WB4EMK	146.145	146.745	N	
DORCHESTER	W4NAT	147.78	147.18		
EDMUND	WR4ACD	147.96	147.36	N	A
FLORENCE	W4ULH	146.25	146.85		
FLORENCE	WR4AGM	146.37	146.97	N	PA
FT MILL	WR4ABK	147.78	147.18		
GASTON	WB4NEP	144.61	145.21		A
GREENVILLE	WR4ADG	146.01	146.61	N	
GREENVILLE	W4AZT	146.10	146.70		PA
GREENVILLE	WR4ADG	146.22	146.82	N	A
GREENVILLE	WR4	147.675	147.075	N	PA
GREENWOOD	WR4AUE	147.765	147.165		PA
GREER	W4IQQ	146.34	146.94		
LANCASTER	WC4AAW	146.10	146.70		PA
LAURENS	WA4UZA	146.25	146.85		A
LITTLE MT	K4AVU	147.81	147.21		C
LONG MT	WA4JRJ	147.87	147.27		
MARION	W4YLT	146.40	147.00		
MYRTLE BEACH	WR4AXC	146.01	146.61	N	
N. AUGUSTA	WR4ABB	146.13	146.73		
N. AUGUSTA	WR4ALS	147.93	147.33	N	
ORANGEBURG	WR4AQY	147.69	147.09		A
PICKENS	WR4ADP	146.40	147.00		
ROCK HILL	WC4ABD	146.43	147.03		PA
SAVANNAH (GA)	W4HBB	146.28	146.88		
SAVANNAH (GA)	W4HBB	146.37	146.97		A
SPARTANBURG	K4JLA	147.69	147.09	N	PA
SUMMERVILLE	WR4	146.25	146.85	N	C
SUMTER	WR4AOI	146.04	146.64		PA
SUMTER	WR4BCM	147.615	146.015		
SUMTER/SHAW	WR4AUS	147.66	147.06		
TOCCOA (GA)	WA4LUC	146.19	146.79		
WHITE HALL	WR4AQL	146.31	146.91		

TENNESSEE REPEATERS

TWO METERS

ALAMO	WR4API	147.135	147.735	W
ALCOA	WR4APM	146.25	146.85	E
ALTAMONT	WR4AWN	146.37	146.97	CN
BRISTOL	WR4AFZ	146.28	146.88	NE
BRISTOL	WR4AXQ	147.60	147.00	NE
BROWNSVILLE	WR4ASI	146.655	146.055	SW
CHATTANOGA	K4CMY	146.01	146.61	SE
CHATTANOGA	WB4UDX	146.19	146.79	SE
CHATTANOGA	WR4AFS	147.60	147.00	SE
CLARKSVILLE	WR4AOO	147.60	147.00	CN
CLEVELAND	WR4AQV	147.78	147.18	SE
COLUMBIA	WR4AIX	147.72	147.12	CN
COOKEVILLE	WR4ANW	146.07	146.67	E
COOKEVILLE	WB4QSJ	147.81	147.21	E
COVINGTON	WR4BBC	147.93	147.33	SW
CROSSVILLE	WR4	147.93	147.33	E
DAYTON	N4OU	147.99	147.39	SE
FAYETTEVILLE	WR4BAQ	147.63	147.03	S
GALLITIN	WR4BCX	147.84	147.24	CN
GREENVILLE	WR4AHP	146.10	146.70	E
GREENVILLE	WA4LYF	147.66	147.06	NE
HENDERSONVILLE	W4KKO	144.89	145.49	CN
HENDERSONVILLE	WR4BCX	147.63	147.03	CN
HOHENWALD	WR4	147.93	147.33	W
JACKSON	WR4AQN	147.81	147.21	W
JOHNSON CTY*	WR4AIP	146.19	146.79	NE
JOHNSON CTY*	WA4DIU	147.87	147.27	NE
KINGSPORT	WR4ADO	146.16	146.76	NE
KINGSPORT	WR4AGE	146.37	146.97	NE
KNOXVILLE	WR4AIA	146.01	146.61	E
KNOXVILLE	WR4ADF	146.34	146.94	E
KNOXVILLE	WR4AHF	146.40	147.54	E
KNOXVILLE*	WR4APU	146.13	146.73	E
LAFOLLETTE	WR4AKW	146.07	146.67	E
LEBANON	WR4BBM	146.13	146.73	CN
MADISON	WR4AKN	146.04	146.64	CN
MANCHESTER	WR4ACI	146.10	146.70	CN
MEDINA	K4BEZ	146.37	146.97	W
MEMPHIS	WR4	144.89	145.49	SW
MEMPHIS	WR4AHK	146.01	147.51	SW
MEMPHIS	WR4AYR	146.04	146.64	SW
MEMPHIS	WR4AOG	146.10	146.70	SW
MEMPHIS	WR4AGR	146.13	146.73	SW
MEMPHIS	WR4ABS	146.19	147.51	SW
MEMPHIS	WR4AHO	146.22	146.82	SW
MEMPHIS	WR4AZK	146.25	146.85	SW
MEMPHIS	WA4ETE	146.28	146.88	SW
MEMPHIS	WR4AEX	146.34	146.94	SW
MEMPHIS	WR4BLJ	146.40	147.00	SW
MEMPHIS	WR4AXF	146.46	147.06	SW
MEMPHIS	WR4BCU	147.63	147.03	SW
MEMPHIS	WR4AWT	147.67	147.09	SW
MEMPHIS	WB4DAZ	147.72	147.12	SW
MEMPHIS	WR5AII	147.75	147.15	SW
MEMPHIS	WR4	147.78	147.17	SW
MEMPHIS	WR4AZC	147.87	147.27	SW
MEMPHIS	WR4ASF	147.90	147.30	SW
MEMPHIS	WR4ATA	147.96	147.36	SW
MEMPHIS	WR4ASR	147.99	147.39	SW
MORRISTOWN	WR4	147.63	147.03	E
NASHVILLE	WR4AWV	146.01	146.61	CN
NASHVILLE	WR4AKN	146.07	146.67	CN
NASHVILLE	WR4ACS	146.16	146.76	CN
NASHVILLE	WR4AFA	146.19	146.79	CN
NASHVILLE	WR4ABV	146.25	146.85	CN
NASHVILLE	WR4ACY	146.28	146.88	CN
NASHVILLE	WR4AGX	146.34	146.94	CN
NASHVILLE	AI4P	147.615	147.015	CN
NASHVILLE	WR4AUX	147.75	147.15	CN
NASHVILLE	WB4HFS	147.78	147.18	CN
NASHVILLE	WA4YQC	147.87	147.27	CN
NASHVILLE	WB4ZSA	147.90	147.30	CN
NASHVILLE	WR4BBT	147.945	147.345	CN
NASHVILLE	WR4AKN	147.96	147.36	CN
NASHVILLE	WR4	147.975	147.375	CN
NASHVILLE	WB4DLQ	147.99	147.39	CN
NEWBERN	AA4HF	146.745	146.145	NW
OAK RIDGE	WR4ADQ	144.85	145.45	E
OAK RIDGE	WR4AGJ	146.22	146.82	E
OAK RIDGE	WR4AGL	146.28	146.88	E
OAK RIDGE	K4EAJ	147.72	147.12	E
PARIS	WR4AYM	147.96	147.36	NW
PULASKI	W4JVO	146.715	146.115	S
SAVANNAH	WA4HGN	146.31	146.91	W
SHELBYVILLE	WR4AQM	147.66	147.06	S
SHORT MT.	WR4AZF	146.31	146.91	CN
SPARTA	W4BSA	147.69	147.09	CN
SPRINGFIELD	WR4AGH	147.63	147.03	N
UNION CITY	WR4AUQ	146.10	146.70	NW
UNION CITY	K4MVE	146.655	146.055	NW
WAVERLY	WR4AYB	146.685	146.085	W
WINCHESTER	WR4AFH	146.22	146.82	S

GEORGIA REPEATERS

TWO METERS

ADAIRSVILLE	WB4LRA	146.085	146.685
ALBANY	WR4ADM	146.10	146.70
ALBANY	WR4ANB	146.22	146.82
AMERICUS	WR4AQH	147.87	147.27
ATHENS	WR4ABJ	146.13	146.73
ATLANTA	WR4ABE	146.04	146.64
ATLANTA	W4DOC	146.22	146.82
ATLANTA	WR4ABC	146.37	146.97
ATLANTA	WR4ARK	146.40	147.00
ATLANTA	WR4AHS	147.855	147.255
ATLANTA GA TECH	W4AQL	147.66	147.06
AUGUSTA	WR4AGD	146.34	146.94
AUGUSTA	WR4ALS	147.72	147.12
BALDWIN	WD4NHW	147.78	147.18
BRUNSWICK	WR4	146.13	146.73
BUFORD	WR4BBV	147.87	147.27
CARROLTON	W4FWD	146.04	146.64
CEDARTOWN	WR4AZU	147.72	147.12
COHUTTA-RITY	WR4AXM	146.46	147.06
COLUMBUS	W4YYE	146.13	146.73
COLUMBUS-RTTY	K4ACH	144.77	145.37
CONYERS	WB4JDM	147.81	147.21
COVINGTON	WA4ASI	146.925	146.325
CUMMING	W4ZTL	144.81	145.41
CUMMING	WR4AOC	147.75	147.15
DALLAS	WR4AHM	146.25	146.85
DALLAS	KB4EO	147.96	147.36
DUBLIN	WR4AWI	147.96	147.36
EATONTON	WR4ACX	146.10	146.70
FORSYTHE	WR4AQA	147.315	147.915
GAINSVILLE	WR4AEK	146.07	146.67
GRIFFIN	WR4AIV	146.31	146.91
GRIFFIN	WR4AEA	146.43	147.43
HAPEVILLE	WR4ABN	147.63	146.03
HARTWELL	WA4NBP	146.895	146.295
IRWINTON	WB4NFG	147.84	147.24
ISABELLA	W4MM	146.13	146.73
JESUP	WR4	146.07	146.67
JONESBORO	WR4AED	144.85	145.45
LAGRANGE	WR4AVJ	147.93	147.33
LYONS	WR4APZ	146.22	146.82
MABLETON	WB4BMC	146.13	146.73
MACON	WB4OLL	144.83	145.43
MACON	W4BKM	146.06	146.66
MACON	K4ICT	146.46	147.46
MARIETTA	WR4	147.075	146.675
MARTINS KNOB	AC4P	147.835	147.235
MILLEDGEVILLE	WR4AUM	147.66	147.06
MOULTRIE	WR4	146.19	146.79
NEWNAN	WR4AIH	146.19	146.79
QUITMAN	WR4BBH	146.28	146.88
RINGOLD	WR4	146.715	146.115
ROME	WR4ADH	146.34	146.94
ROSWELL	WA4BRO	144.87	145.47
SANDY SPRINGS	WB4CPL	144.75	145.35
SAVANNAH	WR4AVO	146.10	146.70
SAVANNAH	WR4AVO	147.63	147.03
SAVANNAH*	W4HBB	146.28	146.88
SAVANNAH*	W4HBB	146.37	146.97
STONE MTN	W4BOC	146.16	146.76
STONE MTN-RTTY	WR4BAG	147.105	147.705
SVR CRK/MT ALTO	WR4BBG	147.90	147.30
SWAINSBORO	WR4APR	146.16	146.76
SWEAT MTN	WR4AMN	146.28	146.88
SWEAT MTN	WB4UPC	147.94	147.34
THOMASTON	K4IMK	147.99	147.39
THOMASVILLE	WR4	147.66	147.06
TIFTON	K4QT	147.285	147.885
TOCCOA*	WA4LUC	146.19	146.79
UNION CITY	WA4UPE	146.025	146.625
VALDOSTA	WA4SMH	146.16	146.76
VALDOSTA	WA4SMH	147.135	147.735
VIENNA	WA4RWS	144.89	145.49
WARNER ROBBINS	WR4AFD	146.25	146.85
WARNER ROBBINS	WR4AZP	147.90	147.30
WAYCROSS	WR4AMK	146.04	146.64
WRIGHTSVILLE	WR4RVB	146.34	146.94
220 MHZ			
HELEN	WB4OPS	222.52	224.12

***CVRA Full Member Repeater**

(Index Ctsy: David Nulty, N4ATI, Fort Benning, Ga.)

MARYLAND REPEATERS

TWO METERS

ASHTON	WR3AFT	146.40	147.00
BALTIMORE	WR3AFM	146.07	146.67
BALTIMORE	WR3ACR	147.63	147.03
BALTIMORE	WR3AIU	147.885	147.285
BEL AIR	K3GUX	146.175	146.775
CAMBRIDGE	WR3ADY	146.445	147.045
CHELTENHAM	WR3AGF	147.75	147.15
CHEVERLY	WR3ABC	146.01	146.61
COLUMBIA	K3CUJ	147.735	147.135
COLUMBIA	WR3AGP	147.99	147.39
CUMBERLAND	WR3AGI	146.28	146.88
DAVIDSONVILLE	WR3AJP	147.705	147.105
E. BALTIMORE	WR3AFI	147.84	147.24
FREDERICK	WR3ABL	146.13	146.73
FREDERICK	WR3ADR	147.66	147.06
FROSTBURG	WR3AKV	147.99	147.39
GAITHERSBURG	WR3AKP	146.355	146.955
GREENBELT	WR3ABB	146.28	146.88
HAGERSTOWN	WR3ABT	146.34	146.94
HAVRE DE GRACE	WR3ADH	146.25	146.85
JESSUP	WR3ADZ	146.16	146.76
LEXINGTON PARK	WR3ACP	146.04	146.64
LEXINGTON PARK	W3NET	146.265	146.865
N. BALTIMORE	WA3KOK	146.34	146.94
POTOMAC	WR3ACF	147.87	147.27
ROCKVILLE	WR3ABM	146.04	146.64
SALISBURY	WR3ABS	146.22	146.82
SALISBURY	WA3YII	146.385	146.985
SEVERNA PARK	WR3ACL	146.10	146.70
SILVER SPRING	WR3ABU	146.25	146.85
SILVER SPRING	WR3AEO	147.78	147.18
W. BALTIMORE	WR3AGS	147.945	147.345
WASHINGTON	WR3AGX	147.96	147.36
WHEATON	WR3AFD	147.69	147.09
6 METERS			
BALTIMORE	WR3AJC	52.03	53.03
WHEATON	WR3AFV	52.25	53.25
220 MHZ			
DAMASCUS	WR3AHS	222.98	224.58
GAITHERSBURG	K3YAN	222.78	224.38
W. BALTIMORE	WR3AKN	223.34	224.94
WHEATON	WR3AFD	223.30	224.90
440 MHZ			
ASHTON	WR3ADV	448.85	443.85
BALTIMORE	WR3AFM	444.35	449.35
BURTONSVILLE	WR3AGM	448.65	443.65
E. BALTIMORE	W3WCQ	439.25	426.25
E. BALTIMORE	WR3AFI	444.55	449.55
FREDERICK	WR3AKE	443.75	448.75
FREDERICK	WR3ABL	444.80	449.80
GAITHERSBURG	WR3AKP	443.60	448.60
GLEN BURNIE	WA3MEJ	448.70	443.70
HAVRE DE GRACE	WR3ADH	448.10	443.10
JESSUP	WR3ADZ	449.10	444.10
LEXINGTON PARK	WA3UMY	448.05	443.05
N. BALTIMORE	WR3	443.825	448.825
SILVER SPRING	WR3ACK	444.00	449.00
SILVER SPRING	WB3ARZ	448.45	443.45
SUITLAND	WR3AEK	444.40	449.40
SYKESVILLE	WR3AIX	444.50	449.50
W. BALTIMORE	WR3	448.55	443.55
WASHINGTON	WR4	449.35	444.35
WHEATON	WR3AFD	444.30	449.30

DELEWARE REPEATERS

TWO METERS

DELMAR	WR3ABS	146.22	146.82
DOVER	WR3ABP	146.38	146.97
NEWARK	WR3ACV	146.10	146.70
NEWARK	WR3AGQ	146.355	146.955
WILMINGTON	WR3ABA	146.13	146.73
WILMINGTON	WR3AGR	147.75	147.15
WILMINGTON	WA3QLS	147.825	147.225
220 MHZ			
NEWARK	WB3JVX	223.36	224.96
WILMINGTON	WR3AFK	222.96	224.54
440 MHZ			
WILMINGTON	WR3AHO	448.00	443.00

(Index Ctsy: T-MARC, Severn, Md.)

W. VIRGINIA REPEATERS

TWO METERS

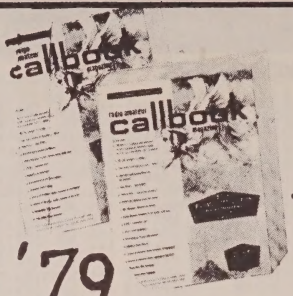
ALDERSON	WR8AKZ	146.13	146.73
BECKLEY	WR8AKZ	146.25	146.85
BECKLEY	WR8ACO	146.34	146.94
BLUEFIELD*	K8BHG	144.89	145.49
BRIDGEPORT	WR8ALC	147.72	147.12
BUCKHANNON	K8WYH	146.25	146.85
CHARLESTON	WR8AER	146.22	146.82
CHARLESTON	WB8CQV	146.28	146.88
COTTAGEVILLE	WR8AKV	146.31	146.91
EAST RIVER MTN*	WR4AXS	146.16	146.76
ELKINS	WR8AOH	146.04	146.64
FAIRMONT	W8JM	146.31	146.91
HUNTINGTON	WR8AFE	146.04	146.64
HUNTINGTON	WR8AGH	146.16	146.76
LOGAN	WR8ADD	146.37	146.97
MCMECHEN	W8WUX	146.31	146.91
MORGANTOWN	WR8ABM	144.83	145.43
MULLENS	WR8AKX	147.63	147.03
NEW MARTINSVLLE	WR8ABY	146.34	146.94
OAK HILL	WD8OQJ	146.19	146.79
PARKERSBURG	WR8ACJ	146.37	146.97
PARKERSBURG	WR8	147.96	147.36
PARSONS	WR8AGU	146.13	146.73
PENNSBORO	WR8	147.90	147.30
PRINCETON	WB8NRK	146.46	147.06
RAVENSWOOD	WR8	146.07	146.67
RICHWOOD	K8VKB	146.34	149.34
ST ALBANS	WR8AJS	146.40	147.00
TERRA ALTA	WR8AEY	147.60	147.00
WEIRTON	WR8AQA	146.34	146.94
WELCH	N8ACQ	144.85	145.45
WHEELING	WR8AEW	146.16	146.76

(Index Ctsy: Steve Rice, K8SR, Dunbar, W. Virginia)

IS YOUR CONTROL LINK FREQUENCY FILED WITH CVRA

With the deluge of new repeaters coming on the air each month in the three CVRA districts, we are getting more and more requests for 220 mhz. and 450 mhz. frequencies to be used for control links.

Our master repeater and frequency computer print out contains all this information, although it is obviously not printed in the Journal. If you are planning to utilize a control link and need a frequency in either 220 mhz. or 450 mhz. be sure to contact your State Director. He has the list and knows which frequencies are free of interference for use in your particular area. After he coordinates he will list your frequency on the computer and keep on file to prevent it being assigned to some other group nearby. (Ken, WA4BVW)



'79

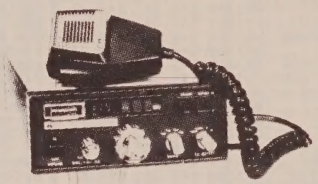
THE BIG SIGNAL
UNADILLA
"W2AU" BALUN

THE OLD RELIABLE™
REYCO
"W2VS" ANTENNA COILS

THE HAM-KEY
NOW 5 MODELS

SWAN
ELECTRONICS
A subsidiary of Cubic Corporation

There's nothing like it!



MIDLAND 13-510

There is no substitute
hy-gain
Amateur Radio Systems

RADIOAMATEUR callbook

Philmore

The ALLIANCE

AMECO

KDK FM 2015R
2 Meter
Synthesized
Transceiver
In Stock

Mosley

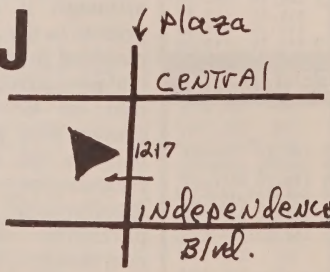
Taylor Radio

Reconditioned Equipment

SERVICE??
NO PROBLEM!
It's OUR Policy.

Wilson

MFJ



Larsen

(704) 334-7974

Home-Tronics
HAM, CB, STEREO, SALES WITH SERVICE

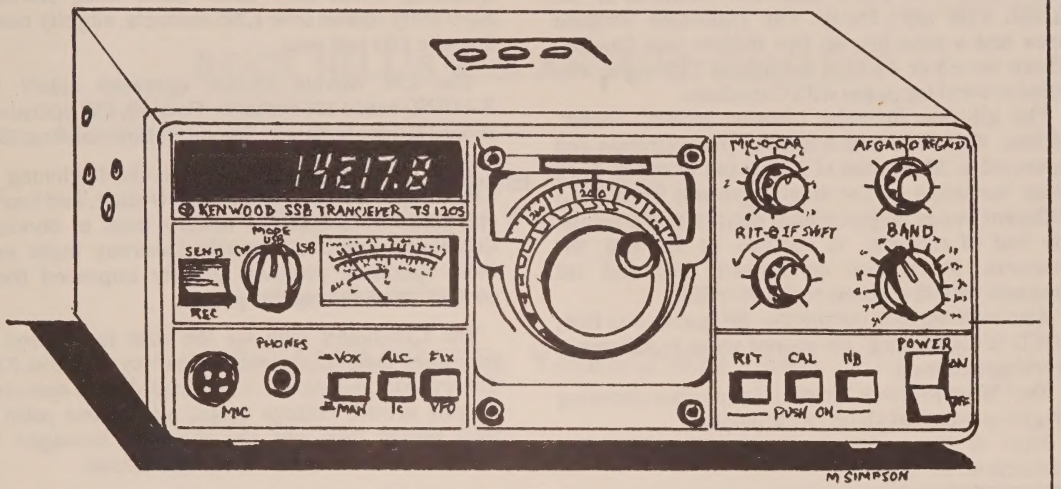
AMECO Publications
ARRL Publications

VISA
master charge

JOHN S. DAVIS
WB4KOH
Owner

1217 The Plaza
Charlotte, N.C. 28205

INTRODUCING - KENWOOD'S



·TS-120S·

LIST PRICE-- $699.00

OUR PRICE

$629.95 PREPAID SHIPPING

KENWOOD'S NEW 80-10 MTR, ALL SOLID STATE RIG
NO TUNING OR LOADING, DIGITAL DISPLAY, IF SHIFT
NOISE BLANKER, RIT, AND 200 WATT INPUT
COMPACT SIZE, ONLY 3½" x 9¼" x 13½"

WE STOCK A COMPLETE LINE OF TOP NAME AMATEUR EQUIPMENT

CALL FOR QUOTE

Vickers

BANKAMERICARD master charge

P.O. BOX 8648 683-1597 520 EAST MAIN ST. DURHAM, N.C. 27707

VIRGINIANS ACTIVE IN VHF CONTEST

- by Wally Burkette, WA4KXV

Some of the best VHF-UHF conditions in quite some time took place June 9-11 weekend of the ARRL VHF QSO Party. The Tidewater Virginia area had a pipe line on two meters into Canada. There were 3 or 4 active stations in Tidewater who filled several log pages with Canadians.

The all-time Roanoke Division leader, "Buzz" Miklos, WA4GPM took a holiday from Virginia and operated at the station of K4WO in Currituck, N.C. Buzz operating in the single operator class on 3 different bands logged a total of over 51,000 points. He had 69 contacts, 15 sections on 432 SSB, 363 contacts, 20 sections on 2-meter SSB and 162 contacts with 42 sections on 6-meter SSB.

Also working well during the QSO party was Bob, N4CD of Lynchburg. He scored some 21,000 points working single-op.

Karl WA4SBC from Virginia Beach also operating single-op reported about 19,800 points.

Most of the activity was on SSB with some contacts on CW and FM.

TECHNICAL TIP—To be valid for any awards, all QSL's must include certain pertinent information: the call of the station worked, your call, the date and time of the QSO (particularly the date, and the month should be spelled out), the band used, and the location from which the QSO took place.

LYNCHBURG ARC FIELD DAY

A CW Novice operator, Mary Pat KA4NHQ was credited as the difference in this years Field Day activities for the Lynchburg (Va.) ARC. The club operating Field Day under their call, K4HEX reportedly scored over 1,250 contacts, slightly more than the 1211 last year.

The CW Novice station operated solely by KA4HNQ made 168 contacts. Overall, CW operators scored 554 contacts with Phone stations landing 533.

Poor propagation conditions at the beginning of Field Day were blamed for a slow start, and heavy rains contributed to the misery most of Sunday. Conditions improved greatly Saturday night and most operating positions greatly improved their contact totals during this period.

The Lynchburg club for the first time, used a computer logging system devised by Bob K4LKQ. The system had its short comings due to operator logging errors, voltage drops, and at one point a total power loss, but the machine managed to survive without any loss of contact entries.

A neat job was done by Fred Fraley AA4FF as he posted Contact totals every two hours to let participants know how well they were doing.

Sunday at 2:00 p.m. everything was shut down and cleaned up. Another successful field day by the Lynchburg club. (LARC Bulletin by WD4EXG)

VIRGINIA CLUB MEETING CALENDAR

Information Supplied by Clubs

ALBERTA - Southern Piedmont ARC - 3rd Thursday, 1900, Southside Va. Community College
BLUEFIELD - East River RC, 1st & 3rd Monday, 2930 at Commercial Bank, Bluefield
CHARLOTTESVILLE - Albemarle ARC, 2nd Wed., 1930 at City Courthouse on 4th Street NE
CHARLOTTESVILLE - University of Virginia ARC, every other Thurs., 2930, Thornton Hall
COVINGTON - VHF Communications Assn. - 2nd Wed., 1930 at different Members homes
DANVILLE - Danville ARS, 1st & 3rd Friday, 1930, Danville Community College
FARMVILLE - Southside ARS, 1st Thursday, 1930, Hampton-Sydney College, Farmville
GALAX - Briarpatch ARC, 1900, Galax Recreation Center
HAMPTON - Southern Peninsula AR Klub (SPARK) 1st, 3rd Wednesday, 1930, VEPCO Building
LYNCHBURG - ARC, 2nd Friday, 2000, Virginia Baptist Hospital Auditorium
MARTINSVILLE - Patrick Henry ARA, 3rd Tues., 1930, 1st National Bank of Martinsville and Henry County
NEWPORT NEWS - SPARK 1st & 3rd Wednesday, 1930 at VEPCO Building in Hampton
NORFOLK - Hampton Reads Radio Assn., 2nd Thursday, 2000, Larchmont Library, Hampton Blvd.
NORFOLK - Tidewater ARC, 2nd & 4th Saturday, 1000, Fort Norfolk, Hampton Blvd.
PETERSBURG - Crater ARS, 4th Wednesday, 1930, John Tyler Community College
PORTSMOUTH - Portsmouth ARC, 2nd and 4th Thursdays, 432 Broad Street, Portsmouth
RICHMOND - (RATS) 1st and 3rd Fridays, 1930, at the Stone House in Forrest Hill Park
RICHMOND - ARC, 2nd Friday, 2000, at the Stone House in Forrest Hill Park
ROANOKE - Roanoke Valley ARC, 2nd and 4th Friday, 2000, Colonial Ave. Presbyterian Church
VIRGINIA BEACH - ARC, 1st Thursday, 1900, at Virginia Beach Recreation Center
WINCHESTER - Shenandoah Valley ARC, 1st and 3rd Fridays, 2000, Club Building on Grace Street

YORK COUNTY AMATUER RADIO SOCIETY

proudly presents

ROCK HILL'S 28th ANNUAL HAMFEST

Date: October 7, 1979
Place: Joslin Park on Lake Wylie

GRAND PRIZE: YAESU 901 - DM

B-B-Q dinner provided as usual by Frank Porter WB4YFD for $3.25. Major motels available: Howard Johnson's, Holiday Inn, Ramada Inn, Quality Inn. Overnight camping is available at the park (no hook-up facilities). Talk in: 146.43/147.03 and 146.52. Each registration includes one prize ticket.

Dealer Information

Write or Call:
Lane Tarleton WA4ZQQ
2305 Cherry Road
Rock Hill, S. C. 29730
(803) 366-7157

Registration

Advance: $2.75
or 2 for $5.00
At Gate: $3.00 each
For more information write:
P.O. Box 4141 CRS
Rock Hill, S. C. 29730

WIDE-AREA REPEATERS NEW BREED

Continued From Page 7

appropriate to do so. If a conversation is going on which pertains to the interest of two or three users, a person listening may feel it improper to call another station and start a separate QSO. People should not use a wide-area machine for hours on end, especially after 7 AM and before midnight. Ten or fifteen minutes is certainly adequate to take care of most traffic. Between midnight and 7 AM it is another story. Usage then, is governed by who is up at the time.

Let me give you a example of how NOT to use a wide-area repeater. This actually happened. Four or five guys were chatting one day, leaving plenty of time for others to jump in. Station A called in and asked if he could call for station B? "Go ahead," was the reply, as it should have been. Well, station B was there. They chatted about nothing of importance, ignoring the others. Station A inquired of the location of station B (both were mobile). Station A, asked if station B was driving a white _____? "Yes," replied station B. "Well, I can see you," said station A. Then, unbelievable of all unbelievable things happened. THEY CONTINUED TO TALK FOR ANOTHER FIVE MINUTES. They could have gone to .52 immediately after making initial contact. The actions of these two should never be repeated by any thinking Radio Amateur worthy of the name. If you are ever using what can be classed as a wide-area repeater, bear the capabilities of the repeater in mind as you use it. Don't appear to be as dumb and inconsiderate as these two nameless, so-called, Radio Amateurs.

People putting up a wide-area machine may find it surprising that support is not what they expected. The .88 machine has been down less than three days total in the last nine months. Most outages have been for only several hours. There are users living

Continued On Page 34

SUPER TOWERS - SUPER REPEATERS

Continued From Page 7

Raleigh. The repeater operating on 28-88 is as the 1,800 level of the WRAL-TV Super tower.

Two other Super towers are planned in the near future in North Carolina, and both of them are scheduled to receive 2-meter Amateur repeaters also.

WFMY-TV in Greensboro is constructing a 2,000 plus foot tower south of the city near Level Cross. Four Greensboro hams have bought the 19-79 machine originally in High Point and plan to mount the machine at or near the 1,800 foot level of this tower.

The third planned Super repeater will be at Grifton. WITN-TV plans a new 2,000 foot tower to replace their 1,600 foot one. The Grifton 16-76 repeater located on the old WITN-TV tower has been giving fantastic coverage for years. The Eastern North Carolina Repeater Group, operators of the Grifton machine have coordinated 085-685 for their new machine to be located on the new WITN-TV tower.

The 28-88 machine in Raleigh is on the air and doing quite well. (See Cover Story on this Page). The Greensboro and Grifton repeaters will be put on their towers when they are completed. Target date for both machines is sometimes this fall.

Mountain boys may not think 1,800 feet is so high, compared to the many mountain top repeaters which do fantastic jobs of coverage. But keep one thing in mind, how many mountain top repeaters are 1,800 feet H.A.A.T. That's the clincher! (Editor)

THIS IS A PICTURE of the WR4AOE 28-88 repeater cabinet in Raleigh, N.C. There's nothing really unusual about the cabinet and repeater, unless you look down. The clutter near the bottom of the picture are houses and streets. The repeater cabinet sits 1,800 feet off the ground on the WRAL-TV 2,000 foot tower. Photo ctsy, Danny, K4ITL.

HOW THE JOURNAL IS PUT TOGETHER

News is sent to the editor by dozens of clubs, individuals and State Directors and their assistants. The news is compiled, rewritten when necessary and added to other written copy by the editor. Special editors such as the Technical Editor, and Associate editors send their copy in ready for the typesetters. The editor writes heads and decides what style and size type to use.

The Frequency Coordinating Chairman after receiving all repeater index changes from each District Director, meets with the editor to compile all corrections to a computer printout of the various state repeater indexes. The editor also takes other repeater indexes for several states and adds corrections sent in by persons from that State (such as Georgia, Tennessee, West Virginia, Maryland, D.C. and Deleware)

The corrected printout is then sent to the computer operator who keys in corrections, deletions and additions to the various state repeater indexes. A new printout is run off and returned to the editor. This printout will be sent to the camera to be reduced and shot for pasteup on a Journal page layout.

The Sales Manager brings all his advertising for the next issue to the editor. They sit down and with an ad manifest decide which pages to place ads throughout the Journal for most effective ad/news ratio. The editor then goes through the ads, marks up copy which must be typeset and puts this copy with the bundle of stories and sends the package to the typesetters (printer).

The printer provides the editor with long strips of typesetting of the stories and ad elements of type. The editor pastes the strips of type on layout sheets laid out the exact size of a Journal page. The heads are inserted over the stories, page numbers added to the bottom of each page and the page then represents an exact picture of what the completed Journal page will look like.

Upon completion of all pages, the editor calls upon a source of proofreaders to sit down and go over the Journal pasteups carefully and mark any corrections which need to be made.

The stack of pasteups is taken to the typesetter, where corrections are set which the editor pastes down on the pages in their proper place.

The final corrected pages are now ready for the camera. The editor marks pages which are to be in color, and which lines or elements are to be color.

Continued On Page 41

CVRA ASSOCIATE MEMBERSHIP

GET A FRIEND TO JOIN!

THEY WILL RECEIVE THE JOURNAL FOR A YEAR

Send Me The Award Winning CVRA REPEATER JOURNAL,

CVRA ASSOCIATE MEMBERSHIP APPLICATION:

Name _____ Date _____

Address _____ Call: _____

City: _____ State: _____ Zip: _____

Phone: (____) _____ *Member of ARRL?* ___ *Yes* ___ *Life* ___ *No*

The Repeater I call "home" is: _____

Enclosed is: $_____ ($3.00 Per Year.)

J 8-79 R New _____ Renew _____

Mail to:
CVRA
P.O.Box 3325
Burlington, N.C. 27215

WIDE-AREA REPEATERS NEW BREED

Continued From Page 32

IT'S A LONG WAY down through the maze of struts and framework of the WRAL-TV 2,000 foot tower near Raleigh. This is the view seen by owners of the 28-88 Raleigh repeater when they look straight down while standing at the repeater cabinet at the 1,800 foot level. (Photo ctsy, Danny, K4ITL.)

within thirty miles of the machine who use it daily and extensively, who have never offered to support it. It should be noted that in most of the cases, these people use the machine more than most of the avid supporters. It is a commonly held view that everyone on 2m FM should help support one repeater. If that worked out in practice, there would be more and better repeaters nation-wide. The fact of the matter is that some people think that repeaters just materialize out of thin air, require no maintenance or upkeep, and are there solely for their personal use and pleasure. The wide-area machine "sees" more of these types than you would believe. So much for that subject.

There is much to be said about the technical side of locating a repeater on a large tower. I feel those comments should be dedicated to a separate article, for the most past. One rule-of-thumb, since the repeater will be tower-mounted (I can't imagine an 1,800 foot feedline), is that the machine must be able to sustain 100% duty cycle. Most commercial repeaters are not rated for that rugged service. In our case, many on-tower modifications had to be made before the machine would stay together. I have seen the machine keyed-up for four to six hours without dropping for over a minute at a stretch. This certainly generates much final-compartment heat. Another article will follow (get ready, Wayne) explaining the major technical pitfalls to avoid with tower-mounted equipment.

In summation, it is safe to say that all the supporters of WR4AOE welcome use of the repeater by local and transient users alike. It is thoughtful, however, to observe courtesy and use the machine in moderation so others may have the opportunity to use it as well.

Hopefully, we will have an article in a later issue explaining progress on the state-wide linking and how it will work.

HAMFEST SEASON STILL GOING

Continued From Page 9

year. Maybe they'll have to expand into the lake this year.

The New Bern hamfest originally scheduled for the 14th of October promises to be a good event for eastern North Carolina hams. It is really the only one held that far east in the State. We had rumors that they were moving their date to October 7th, but we as of this writing have been unable to confirm. (Check Hamfest Calendar in back of this Journal) the date there should be confirmed and correct.

Asheville will present their "Autumnfest" on Saturday the 13th of October. Club members were so happy with the response last year, they again are pushing the theme . . . "come to the mountains of N.C. and enjoy a weekend of beauty and attend the Hamfest on Saturday and tour Sunday."

On the fourth weekend of October, Norfolk will again be host to the Roanoke Division ARRL Convention at the SCOPE in Norfolk. The club promises much to do and see at this event.

There . . . we've covered the entire season briefly. I know we might have left out some, and maybe not described the most important points of others, but we have tried to give you an unbiased tour of the season the past two issues of the Journal. We hope we have helped you decide to attend a hamfest near by. It is a rewarding experience I wouldn't trade for anything. If we missed you so far this year . . . here's hoping we'll catch you later.

WILLIAMS
RADIO SALES

Unconditionally Guarantees
Its Two-Meter and 220 Mhz. Bomar

CRYSTALS

They work Perfectly or we Replace - at NO Charge!

WE STOCK OVER 461 DIFFERENT PAIRS FOR:

- **WILSON**
- **YAESU**
- **REGENCY**
- **ICOM**
- **DRAKE**
- **STANDARD**
- **KENWOOD**
- **MIDLAND**
- **CLEGG**

We Ship Orders Within 24-Hours (Assuming in Stock)

STOCKING All Standard Repeater Pairs,
Many Split/Splits and some Sub Band.

We can Special Order For Other Rigs Not Listed Above
(3 Weeks Estimate For Delivery)

$8.00 PAIR - 6 PAIR (or More) - $7.50 PAIR

Price Includes 1st Class Postage if Order Accompanied by Check
N.C. Residents - Add 4% Sales Tax.

Now! The Largest Mail-Order Crystal Distributor in The Southeast.

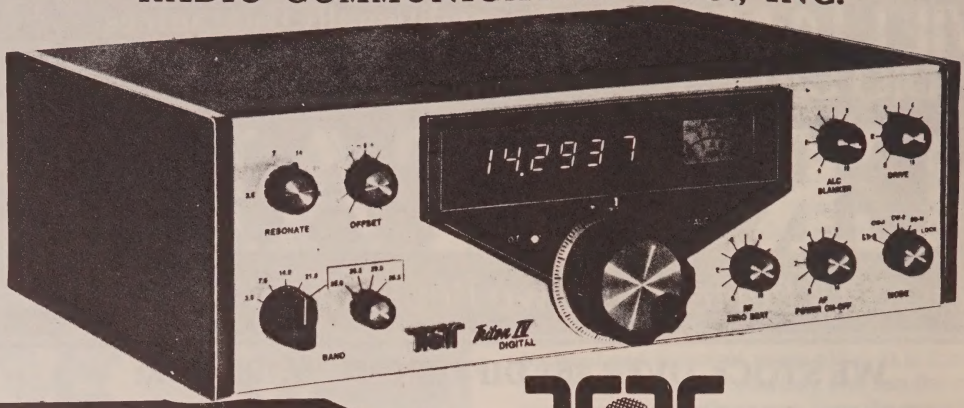
WILLIAMS
RADIO SALES

NORTH CAROLINA
WAYNE C. WILLIAMS K4MOB
RT. 1, BOX 806, COLFAX, N. C. 27235
PHONE (919) 993-5881 AFT. 5 P.M. AND WEEKENDS

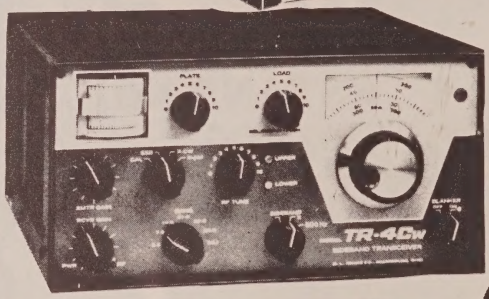
CALL TODAY!
IMMED SHIPMENT
ON IN-STOCK PAIRS
Ask A Friend About Our Service

We Ship Anywhere - 1st Class
Dealers! Call For Prices.

RADIO COMMUNICATIONS CO., INC.



TEN-TEC, INC.



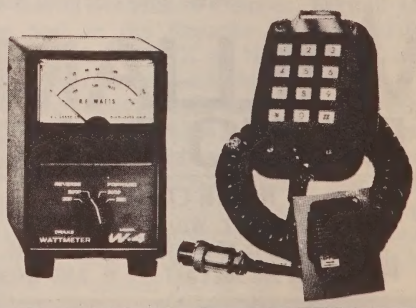
vhf engineering

DRAKE

HUSTLER

Larsen Antennas

ROHN



RADIO COMMUNICATIONS COMPANY, INC.
311 Shenandoah Ave., N.W.
Roanoke, Virginia 24016
Area 703-342-8513

WHERE DO ALL THE JOURNALS GO?

If you read the story about highlights of the CVRA over the past 5 years, you note that the Journal press run generally exceeds the membership by several hundred.

We, like most other publications have a complimentary list which we mail free Journals. This list includes FCC officials, field engineers, ARRL officials, editors and other national magazine editors including: QST, 73, Ham Radio Horizens, Worldradio News, and others. We exchange publications with many other organizations nationwide also.

Congressmen, Senators on the State level and National level each receive the Journal. Frequency Coordinating committees across the country, especially neighboring states also get the Journal. As you can see, we are known nationwide through our distribution.

Each associate member, and two repeater representatives of each member repeater receive the Journal.

After this mailing, there are generally about 300 Journals left over. These Journals are used to supply new incoming members, prospective members and copies to Journal advertisers.

A couple of years ago, a large number of Journals were printed each issue to enable us to give them away at hamfests, but this practice was stopped and the press runs adjusted accordingly.

The Journal press run is decided by the Associate Membership chairman, the Circulation Manager and the Editor about 1 week prior to sending material to the printer. We try never to print too many, yet we want to have enough to go around. (Editor)

COLUMBIA ARC PROVIDES ROAD RACE COMMUNICATIONS

by Bob McCormick, K4FRX

The Columbia ARC supplied communications for a two day race meeting sponsored by the Sports Car Club of America at a track between North and Orangeburg, S.C. on June 16 and 17.

The race track covers 4½ miles and speeds in excess of 100 mph were achieved. Sharp turns including one tight hairpin turn, served to heighten the excitement.

The Amateurs, about a dozen strong handled communications around the track with 2-meter handhelds. The group members put in about 9 hours work each day.

The weather on Saturday didn't help much, it rained pitchforks and hammer-handles part of the time, inducing skids, slides, and knocked over pylons. No serious accidents occurred but everyone got soaked. The only shelter available were two portable johns, and one of them was for ladies only.

Sunday turned out sunny and beautiful. Some 32 sports cars turned out in the competition as they raced the clock around the zig-zaging race course.

SOUTH CAROLINA CLUB MEETING CALENDAR

Information Supplied by clubs

ANDERSON - RC, 4th Thurs. 1930, Anderson Cty. Arts Bldg. - Lunch Break Fri. Noon, Quency's Steak House
CHARLESTON - Holiday VHF Soc. 2nd Wed. 2930 - Pinehaven Shopping Center Meeting Room
CHARLESTON - Charleston ARS, Inc. - Home Federal Meeting Room, Ashley Plaza S.S.
CHARLESTON - Trident ARC, 3rd Wed. 1930 - Park Cir. Presy. Church.
CHERAW - Chesterfield Cty. ARS. 3rd Tue. 1900 Chesterfield Tech.
CLEMSON - Clemson Univ. ARC - (During school year - posted prior to meeting)
COLUMBIA - Columbia ARC (formerly Carolina Rep. Sec.) 1st Mon. 1930, S.C. Elec. and Gas Bldg.
DILLON - County ARC, Each Mon. informal, 2nd Mon., Formal, 1900, Lion's Club Bldg. Washington St.
FLORENCE - Florence ARC, Shoneys, 1st Tues. 1930
FLORENCE - Florence FM Repeater Assn. 3rd Mon. 1930 Florence Darlington Technical Center
GREER - Greer ARC 1st Mon. 1930 Meeting Location announced monthly,
GREENVILLE - Blue Ridge ARS 1st Tue. 1930 Red Cross Building 3rd Tues. Dinner.
GREENVILLE - The Dutch Lunch Club - Mond. S & S Cafeteria at 1245.
GREENWOOD - Piedmont Tec ARC, 1st Mon. 1930 at Piedmont Tec.
KEEOWEE - Keeowee, Toxaway ARC, 3rd Tues. at Keeowee Toxaway Vistors Center
LANCASTER - Lancaster Cty. ARC, 3rd Thurs. 1930, at Standard S & L. Hywy 9 bypass.
LAURENS - Caro. Computer and ARA, 1930, 2nd Fri. Gen. Meet; 4th Fri Digital workshop
ORANGEBURG - Orangeburg ARC - 2nd Thur. 1930 - Quincy's Fam. Steak House
SUMTER - Sumter Repeater Assn. 3rd Mon. 2000 City/County Office Building Conference Room
WALTERBORO - Coastal Amateur Radio Assn. 2nd Sat. 1900, meeting announced on 31/91 net.

ID AND ID AND ID YOU HEAR LOTS OF IT

If you do a lot of listening on 2-meter FM, especially round-table conversations, you could probably log 30 to 40% of the conversations by the various individuals as identification time. Many amateurs feel that when its their turn, they must give the call of EVERY party in the QSO. You hear the same for persons joining in the QSO and others signing.

We happened across a small item in the Lake Erie ARA newsletter where they quoted a letter from an FCC official. The club had apparently questioned when it was actually required and how much for I.D. during a conversation. The letter read in part:

"Section 97.84(a) (station identifications), of the commissions Rules, states that you must identify your station at the beginning and end of each single transmission or exchange of transmissions, and that you must identify the station with whom you are in communication only at the end of your transmission or exchange of transmissions. There is no requirement for you to identify the station you are calling at the beginning of your communications."

If amateurs used this way of identifying, lots more time would be available for QSO on a busy repeater. Of course in the ruling above, if the transmission or series of transmissions last in excess of 10 minutes you must identify your station. Checking into a QSO, carrying on a QSO only requires you identify your station. When you sign, you identify the person's station (and yours•) that you were talking with. In case of a roundtable, the last person to turn it over to you before you signed. (the editor)

NORTH CAROLINA CLUB MEETING CALENDAR

Information Supplied by Clubs

ASHEVILLE - W. Caro. ARS, Bus. 1st Thu. 1900, Hlth. & Soc. Ser. Bldg., Dinner 2nd Mon. 1900 Hungry Bull
BENSON - Johnson ARS 3rd Thur. 1930 at 50-210 Fire Station
BURLINGTON - Alamance ARC 2nd & 4th Monday 1930, at 230 E. Summit Ave.
BURLINGTON - Alamance Repeater Assoc. Inc. Last Sat. 1900 at B & J Cafeteria
CARY - Cary ARC 4th Thur. 1930 at White Plains Methodist Church
CHARLOTTE - Mecklenburg ARS Last Tue. 1930-Red Cross Bldg on Park Rd.
CHARLOTTE - Charlotte RC 1st Thur. 19 - Club Bldg. - WSOC-TV Tryon St.
CHARLOTTE - Friday Lunch Group Fri. 1200 - Mediterranean Rest. on Independence Blvd.
CONCORD - Cabarrus ARS, 3rd Mon., 1930, Kimball Memorial Lutheran Church, Aux. Bldg., Kannapolis
DURHAM - Durham FM Assoc. - 2nd Tue. 1800 - Picadilly Cafeteria, S. Sq. S.S.
DURHAM - Triangle Radio Alert Network - 3rd Thurs. 1800 Picadilly Cafeteria, S.Sq. S.S.
EDEN/REIDSVILLE - Rockingham County ARC 1st & 3rd Mon., 1900 Wentworth Courthouse
FAYETTEVILLE - Cape Fear ARS 3rd Mon. 1900 - Methodist College,
FRANKLIN - Franklin ARC, 2nd Thur. 1900 - Macon Savings & Loan Assn.
GASTONIA - Gaston Cty. ARS - 1st Mon. 1900 - Community room at Eastridge Mall
GREENVILLE - Brightleaf ARC - 2nd Tues. 2000 - Planters Nat. Bank, downtown.
GREENSBORO - Greensboro ARA, 4th Mon., 1830, Founders Hall, Guilford College
GREENSBORO - Greensboro RC Fri. 1930-Club House near Friendship Airport
GREENSBORO - Ladies in Amateur Radio Soc. 1900 2nd Tues., Mbrs. Home, 4th Tues, Apple House Cafe
HIGH POINT - High Point ARC Tue. 1930 - Old Mill Rd.
JACKSONVILLE - Onslow ARC 2nd Sat. 1000 - Howard Johnsons Restaurant
KANNAPOLIS - Cabarrus County ARS 3rd Mon. 1930, Activity Bldg., Kimball Memorial Lutheran Church
LAURINBURG - Scotland County ARS 1st Wed. - Cablevision Office
LEXINGTON - Healing Springs Mt. VHF Soc. Last Mon. 1930 - Burlington House Furniture Co., Personnel Office
LUMBERTON - Lumberton ARC, 3rd Thu. Robeson County Public Library at 1930
MORGANTON - Morganton ARC, 1st Mon., 1930, W. Piedmont Community College
NEW BERN - New Bern ARC, 3rd Thursday, 1930, Golden Corral Steak House
RALEIGH - Raleigh ARS - 1st Wed. 1930 - W. Community Room, Crabtree Valley Mall
ROCKY MOUNT - Rocky Mount ARS, 3rd Thurs., 1900 Farmer's Restaurant in Sharpsburg
SALISBURY - Rowan ARS & 4th Mon. 2000-Salisbury City Hall, Main Street
SHELBY - Shelby Radio Club 2nd Mon. 1830 Hungry Bull Restaurant, Dutch Supper
SILVA - Smokey Mt. ARC, 2nd Tue. 1900 - Southwest Tech. Institute
STATESVILLE - Iredell City ARS - 2nd Thurs. 1900 - Hall of Justice, Water & Tradd Sts.
WILMINGTON - Wilmington VHF Assn., 2nd Tue. of Jan. and all odd months, at Caro. Savings & Loan; Even Months, Social Meet at New Hanover Mem. Hosp. Ed. Bldg.
WINSTON-SALEM - Forsyth Amateur Radio Club, 2nd Friday - Nature Science Center

A LOOK BACK OVER THE YEARS

HIGHLIGHTS OF THE CVRA

It is always interesting to look back over the years in an organization and see what happened. As we glance through August issues of the CVRA Journal over years past, we find quite a few anniversaries or events worth noting.

In August of 1975, Lindsay Cleveland, W4IZI was appointed Associate Membership Chairman. Now 4 years later, we report Lindsay leaving the State and Larry McClarin being appointed Associate Membership Chairman. Now 5 years

In August 1976, the CVRA Journal reported the restructuring of the CVRA from 9 districts to the present three districts made up of South Carolina, North Carolina and most of Virginia.

In August, 1977, Wayne Williams, K4MOB took over the reins as Editor of the Journal, replacing Bill Parris, AA4R (K4GHR) who had held the post for 6 years.

August, 1978 saw two noteworthy events. Al Ross, K4CAW assumed chairmanship of the Frequency Coordinating Committee from Herman Cone III, WB4DBB who resigned. The Northern Virginia FM Association swung their full support to the CVRA and became member repeaters in our organization.

In August, 1979, we report the leaving of Lindsay, W4IZI as Associate Membership Chairman of the CVRA and Circulation Manager of the Journal. He is being replaced by Larry McClarin, WB4VJE, Associate Membership Chairman, and Jim Bartlett, WB3JMH of Greensboro, Circulation Manager.

Other interesting statistics over the past years include:

AUGUST 1974

The Journal circulation was 600 copies. We had 223 Associate Members. The repeater index showed 35 2-meter repeaters in N.C., 10-S.C. and 23-Va. for a total of 68. The 1975 ARRL Directory listed 843 repeaters nationwide.

AUGUST 1975

The Journal circulation moved up to 1,000 copies and we had 452 Associate Members in the CVRA. 2-meter repeaters totaled 93 in the 3 state area. N.C.-46, S.C.-17 and Va.-30. The ARRL 1976 directory listed 1289 repeaters nationwide.

AUGUST 1976

A 50% increase in Journal copies for 1976 ran 1,500. Repeaters in the 3 states grew to 126. N.C. had 63, S.C. 23 and Va. 40, a steady increase in machines for the 3 states. Associate Membership in CVRA was 735 amateurs.

AUGUST 1977

The August 1977 Journal was cut back to 1,500 issues for economy measures. Associate membership in Aug. 1977 totaled 1,270. Repeaters totaled 157 with N.C. 72, S.C. 30 and Va. 55.

AUGUST 1978

CVRA Associate Membership passed the 2,000 mark and repeaters inched toward the 200 mark as 183 2-meter repeaters were listed in the 1978 August Journal. North Carolina listed 80, South Carolina 43, and Virginia 60 repeaters on 2-meters. 2,500 Journals were printed.

TODAY . . . AUGUST 1979

This year, we are printing about 3,500 Journals, Associate Membership after a small dip in May and June, has jumped back to more than 2,500. Our repeater index for 2-meters this issue will show in excess of 225 repeaters on 2-meters. We estimate the breakdown since final tabulations have not been made as this story is being written: North Carolina, 95, South Carolina 47, and Virginia 78.

1974-1979. . .5 Years

In five short years, the CVRA has grown with 2-meters across our three states. We show an increase of over 2,300 members in 5 years, an increase of 2,900 Journals per issue in 5-years and an increase of over 155 repeaters on 2-meters in 5 years. The most drastic increases in all categories have been the 1977-1979 period. It makes us wonder where we'll be in august of 1981. . . (The Editors)

AMATEUR RADIO SEES A 6% GROWTH IN THE PAST YEAR

The ranks of Amateur radio grew to an all-time high of 363,820 at the year ending June 1. This represented an increase of 6.3%.

Extras showed the greatest growth last year, with Novices showing the second biggest gain. There were 23,211 Extras, a 15.4% increase while Novices were up 9.5% to 66,363. The least growth reflected in the Technician class, up only 4% to 69,162. The Advanced Class license registered a 5.6% increase with 84,181. There were 120,903 General Class licensees, on June 1, up 4.8% for the year. (Editor)

GEORGETOWN COMMUNICATIONS

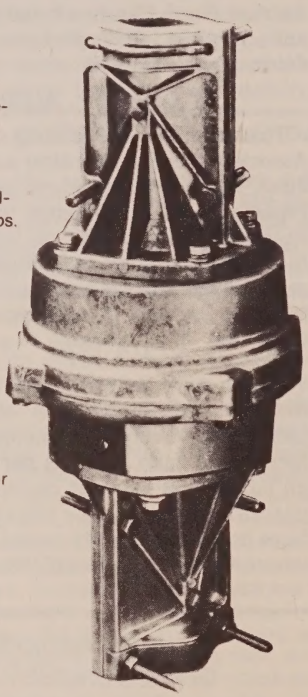
1074 PATTON AVENUE • P. O. BOX 6843
ASHEVILLE, NORTH CAROLINA 28806
TELEPHONE 704/252-9815
CARL E. SMITH, N4AA

master charge THE INTERBANK CARD

VISA

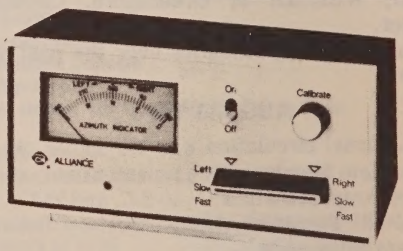
ALLIANCE
Heavy Duty
Rotator

- Max. vertical load - 1000# (vertical balanced)
- Max. wind load bending moment - 10,000 in-lbs. (side-thrust overturning)
- Starting torque - 400 in. lbs.
- Brake torque (wind-milling) - 1,800 in. lbs.
- Hardened steel drive gears
- Bearings - 100-⅜" diameter (hardened)
- Mast mounting size range - 1-⅜" O.D. to 2-½" O.D.
- Cable - 6 conductor
- Voltage input - 117 volts A.C. 60 hertz
  = volts
- Shipping weight - 17 lbs.
- Meter - D'Arsonval, taut band



- **WITH EXCLUSIVE DUAL SPEED CONTROL**

Model HD-73



IN STOCK FOR IMMEDIATE DELIVERY

WE STOCK AMIDON TOROID CORES OF ALL TYPES

WE ALSO HAVE "HO" AND "N" GAUGE
MODEL RAILROAD SUPPLIES

HOW JOURNAL IS PUT TOGETHER

Continued From Page 33

They are then sent to the camera for photographing, 2 pages at a time. Full page-size negatives are checked carefully. Color negatives are checked to see that they line up with the part of the page which is black. After final checks are made, the Journal, now a 1-inch stack of negatives is delivered to the printer.

The printer, who requires 10 days to 2 weeks, delivers the completed Journal to the editor on the first Friday of the month. The editor takes the 14 to 16 cartons of books to the circulation manager, who in turn takes them home.

The Circulation Manager by now has a huge roll of labels from the computer, one label for each member of the CVRA. He calls in helper friends who come by and the weekend is spent affixing labels to Journals, bundling them in stacks and placing in zip code sequence in routed mail bags. Early Monday morning, the Circulation Manager takes the stack of mailbags to the post office for mailing.

DAFFYNITIONS

QSL Non-bureau-is—A condition periodically affecting certain parts of the country. There are some who do not believe this function really exists.

Five to 12 days later you get your journal in the mail. Your Journal staff takes a month off. Then the same thing starts all over again.

JOURNAL DEADLINES DEFINED

Although we publish upcoming deadlines for the next issue of the Journal each quarter, several individuals have asked for our yearly deadlines.

The CVRA Journal is published each quarter in FEBRUARY, MAY, AUGUST and NOVEMBER. Deadlines are the 1st day of the PRECEEDING MONTH.

Each stage of construction of the Journal has deadlines which must be followed to allow time to complete them. Here is an example of how the deadlines were followed for this August Journal:

JULY 1 - Copy & Ad deadline to Editor & Sales
JULY 3 - Begin feeding copy to Typesetter
JULY 9 - Final copy to Typesetter
JULY 10 - Final Repeater indexes to Computer
JULY 11 - Final Typesetting back to editors
JULY 14 - Final corrections inserted in Pasteups
JULY 16 - Pasteups to camera
JULY 19 - Complete negatives to printer
AUG. 3 - Delivery of Journals to Editor
AUG. 6 - Journals in Mail at Post Office

Continued On Page 48

NORFOLK AMATEURS RECEIVE AWARDS FROM THE NAVY

Several Amateur radio operators in Norfolk, Virginia received awards for handling phone patch traffic between crewmembers of the aircraft carrier USS Independence and their relatives back home.

Captain Thomas Watson, Jr., commanding officer of the Independence presented the awards to N4AXM, W4JJL, WB4NEE, WB4ZSE, WB4ZSQ, WA4ROU and WB4CUY. (Tnx HR Report)

WHAT DO WE DO NOW???

Continued From Page 1

ing a crystal type 220 mhz rig. However a call to them indicates they do not have them yet, and cannot tell you when or how much.

Meanwhile all the rest of the companies are sitting on their backsides and not giving us 220 equipment.

It could be they are waiting for the results of WARC '79. Many Amateurs fear the claiming of 220 by Marine interests will be detrimental to the band, but I believe otherwise. I cannot believe the Marine radio people would want a band on 220 mhz. This would cause them massive problems getting everyone converted over. I think they grabbed 220 to use as a ace-in-the-hole for something else they want but ain't telling yet. 220 will be a valuable trade-off for them. I guess we'll know in a few months.

Irregardless of what the manufacturers, WARC, or whoever else thinks, 220 is moving in this country. If you look at the 1979 ARRL repeater directory (although it is about 8 months out-of-date now) you can still measure activity. The new book shows almost 425 repeaters on 220 mhz. nationwide. In the 1978-79 directory the count stood at less than 325 repeaters.

California continues to lead all states with 95 machines, followed by New York which made tremendous strides this past year with 60 machines. They had only 18 last year. Third across the nation is Illinois with 29 machines, followed by Pennsylvania with 25. Tying for 5th place is Connecticut and Ohio with 24 repeaters each. Texas has 20 and North Carolina has 19 for 7th and 8th place in the country. 220 activity seems heaviest on the West Coast and New England areas in the cou - try. Surprisingly Florida is tied for 9th place with only 18 machines on 220 mhz. country.

Virginia lists only 1 machine and South Carolina only 4 on 220.

As we can see, 220 FM is standing in the position that 2-meters was in 1972. Amateurs are looking for new horizons to conquer. For FM, 220 is the direction they are taking. Now if the manufacturers will just wake up some day, we can get the show back on the road and quit fooling around.

- Wayne C. Williams, editor

CVRA JOURNAL ADVERTISING RATE CARD (Effective 1-1-79)

AD DEADLINES ARE: JAN. 1, APR. 1, JULY 1, OCT. 1

	SIZE	PER ISSUE	CONTRACT PER ISSUE
INSIDE FRONT AND BACK COVER	6'' x 7½''	$60.00	$55.00
FULL PAGE	6'' x 7½''	40.00	35.00
ONE-HALF PAGE	6'' x 3¾''	22.50	20.00
ONE-QUARTER PAGE	2⅞'' x 3¾''	12.50	10.00
BUSINESS CARDS	Standard Size	9.00/yr. (In Advance)	
CLASSIFIED ADS	(30 word max)	1.75 per ad (In Advance)	
HAMFEST ADS	6'' x 7½''	35.00 (In Advance)	

Rates above apply to exact size, camera ready ad copy. Composition and typesetting for full page ad approx. $12 to $15. Artwork or ad reductions/enlargements are $3.75 each. For color ads, ad $15.00.

Send all copy to: Ken Holliday, WA4DYY, 1923 Halifax Court, High Point, N.C. 27260. Contract advertising will be reinserted if no new copy received by deadline. Advertisers on contract may be billed quarterly if requested. Business Cards, Classified and Ham Fest ad insertions must be sent in Check with order.

FIELD DAY...1979!

- by Mike Williams, WA4JIY

The sun slowly crept over the rolling wooded hillsides signaling another warm June day. The birds flew lazily overhead, and occasionally a fish jumped happily in the blue-green lake. In the distance, down a narrow dirt road, dust from approaching automobiles reached for the blue sky as the invaders from elsewhere converged on the peaceful setting.

"This is it. . .field day!" one of the intruders, a ham operator, exclaimed as he jumped from his antenna-laden car. . .

With haste the small group of dedicated hams strung dipoles, pulled telescoping masts with beams up, and hooked up transceivers. Frequently, two of them ran head-on into each other in the flurry of activity.

"Something bit me! Henry cried, dropping a Kenwood 820 into a washtub filled with ice water and "807s." "Quick," he wailed, "I need bug spray!"

The others laughed merrily and continued their labor as Henry, wielding a spray can of insect repellent, completely enshrouded himself in a cloud of mist.

"Where'd Henry go?" Jim asked, popping open an 807.

"Oh, he's over there somewhere in that cloud of bug spray. He has this thing about bugs," Clyde answered, spilling gasoline all over his shoes and the portable generator.

"Where is everybody?" Clyde asked as he watched the toes of his shoes curl upward. "We've got eighty-five people in the club and there's only seven of us here to set up."

"Let's see," Jim said, "John's out of town. . .Tommy's working second shift. . .Herman's starting his vacation this weekend. . .Jerry had a hot date. . .Linda says the low bands are too noisy for her to operate. . .Chuck's girl friend wouldn't let him come out and Phread's home nursing his sick hamster. The rest said they'd probably be out later to relieve us."

"Yeh. . .I've heard that before," Clyde said, kicking aside a small black snake.

"Ronnie might come out," Jim said. "His mother-in-law is coming to town for a visit and he'll do anything to get away from her."

"Hey," a ham named Bobby called from one of the operating positions, "this 75-meter dipole's got a terrible s.w.r.!"

"Hurry up, you guys, ten minutes to starting time!"

"I can't operate," the 40-meter operator called out. "My programmable keyer won't work and I simply couldn't contest without it," he groaned.

"Use a straight key," Clyde shouted.

"What's a straight key?"

"I think I'm getting a headache," Clyde muttered. "What happened to Jim?"

"He's over there under that tree laying in that bunch of beer cans," a nine year-old boy answered as he tied a piece of RG-8 into a square knot.

"Uh. . .he's probably resting, sonny."

"Nope," the boy answered, "he's drunk as a skunk."

"What about Henry, kid. You seen him?"

"Yeh, the last time I saw him he was chasing a grasshopper with this big can of bug spray," the boy replied.

"Un-huh. Have you seen Mr. Johnson?"

"He's down at the lake fishing with Mr. Hawkins."

"And Ken Jones," Clyde asked as he rubbed his temple.

"Mrs. Jones told him they'd have to fold up the camper and leave when she found out there was no electricity to connect to her microwave oven," the boy reported.

"Mmmm. You don't happen to have a ham license, do you, kid?"

"No."

"Well, then you can be my logger, then."

"Yes, sir. But you'll have to tell me how to spell Mississippi if you talk to them."

"It's a deal, kid."

"First I have to go to the bathroom," the boy replied, running off.

"Where're all those 807s," Clyde mumbled to himself, tripping over a length of coax and falling face down in a hornet's nest.

As the lone survivor of the field day setup ran off into the sunset, pursued by a swarm of angry hornets, in the distance the sound of "CQ field day" could be heard faintly from the speaker of one of the unmanned transceivers.

TECHNICAL TIP—A neat 50-ohm dummy load for up to about 30 watts intermittant dissapation can be made by sandwiching nineteen 1000-ohm, 1 watt carbon resistors between 2 pieces of PWB stock. Arrange the resistors in rows of 3, 4, 5, 4, and 3 for a nice six-sided pattern. Solder the braid of the connecting coax to one PWB surface and solder the center conductor to the other. Keep all connections as short as possible.

RUN YOUR BUSINESS CARD IN THE JOURNAL—$9.00 PER YEAR (IN ADVANCE)

REALTOR®

MLS

HAILEY REALTY
141 OAKLAND AVENUE
ROCK HILL, S.C. 29730

WA4QAT
C. FLOYD HAILEY
OFF. 803/328-1883
RES. 803/366-7986

(919) 993-5881 (AFTER 5)

Williams Radio Sales
THE CRYSTAL COMPANY
K4MOB

WAYNE C. WILLIAMS
AMATEUR EQUIPMENT SALES
ROUTE 1, BOX 806
COLFAX, NC 27235

Laser Cut Dies

KEN HOLLIDAY
Sales
WA4DYY
HOLIDAY STEEL RULE DIE CORP.
P.O. Box 21361, Greensboro, N.C. 27420
919/292-1165

Vickers
COMMUNICATIONS DIVISION
520 E. MAIN ST.
DURHAM, N.C. 27707
683-1597 — 688-6311
WB4TSM Alan

SHERWIN Williams

The Sherwin Williams Company
103 Southgate Shopping Center
Boone, North Carolina 28607
264-9133

WB4DYD
Marcus Setzer
Store Manager

(919) 228-7603

Soundtronic of Burlington
(SERVICE FOR THE AUDIOPHILE)

JACK D. WELCH, SR. - Owner
WB4SGB
713 LYNNWOOD DR.
BURLINGTON, NC 27215

WEST ANTENNA SERVICE
RT. 6 BOX 529A
GREENSBORO, N.C. 27405
PHONE: 621-9941
WB4RLO

ROHN TOWERS AND ACCESSORIES
POWER POLES AND POLE HARDWARE INSTALLED

Joe Weber
WB4OYW

WEBERCRAFT
SOUTH HIWAY 49
HARRISBURG, N.C.
HOME OF THE AMAZING
SUPER SEAT
"CUDDLED IN COMFORT"

John Yarbrough
WB4ALA

Mail: Rt. 10, Box 444
Charlotte, N.C. 28213
Phone:
704/455-5015

REALTOR®

JEFFERSON REALTY
520 W. Friendly Ave.
Greensboro, N. C. 27401

W. B. "CHICK" HOLLIDAY
President
WA4NHC
Tel.: 275-5355
Res. 294-0990

The "We Can Do It" Printer

This Edition CVRA REPEATER JOURNAL
Typeset and Printed By

GOLDEN TRIANGLE PRINTING CO.

May we serve you with fine quality typesetting and printing? Our 14 employees want to assist you with sales brochures, booklets, mailers, flyers, or business printing. Call Ray Oskey or Bill Drake for free estimates. If it's printing we can do it!

Golden Triangle Printing Co
1006 N. Raleigh St. - Greensboro, N.C. - 273-8221

"HAVING RIG PROBLEMS ?"

THEN, TAKE A MOMENT OF YOUR TIME TO CONSIDER THIS . . .

1. Has The Warranty Run Out on Your Rig?
2. Are you Prepared for it to Spend a Long While at the Manufacturers Shop?
3. Does the Prospect of Expensive Postage and Service Charges Upset You?

IF SO, CONSIDER THE ALTERNATIVES

EXPERT SERVICE WITH

BI-COMM

Expert Service offered On VHF , HF, AM, FM & SSB Gear Including DRAKE, COLLINS TEN-TEC, SWAN, WILSON, ICOM, YAESU, KENWOOD, STANDARD, HEATH AND OTHERS

DAILY 3 PM to 10 PM
SAT 9 AM to 4 PM

- MINIMAL TURNAROUND TIME
- COMPETITIVE RATES
- SATISFACTION ASSURED

BI-COMM

BINO COMMUNICATIONS, inc

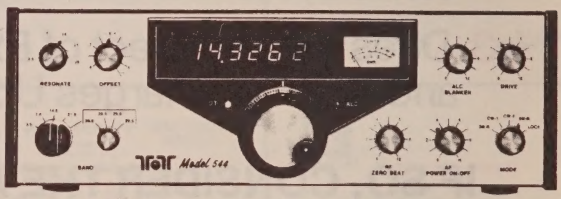
K4CJZ CHUCK
WA4IHA SUE
KA4HIC KEN

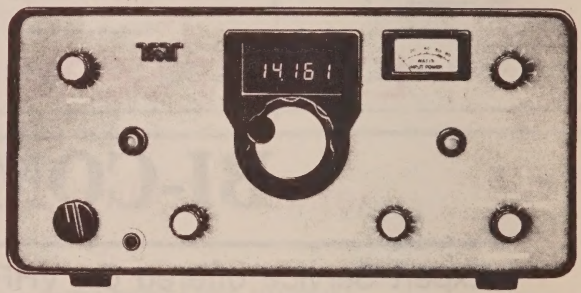
2401 DEVEROW PLACE
GREENSBORO, N.C. 27407
PHONE (919) 292-8052

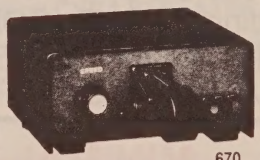
NEW EAST—The New Source for New low prices in New amateur gear.

TEN-TEC TRANSCEIVERS & ACCESSORIES

545 160-10m OMNI 200w Xcvr	$ 899.00
546 As above, w/Digital readout	1069.00
645 OMNI Keyer	85.00
248 OMNI Noise Blanker	49.00
252M 18A, 110 vac power supply	119.00
252M/E 18A, 110/230v supply	126.00
540 80-10m 200w Xcvr	699.00
544 As above, w/Digital readout	869.00
252M 18A 110 vac power supply	119.00
262M As above, w/VOX	145.00
252M/E 18A 110/230v supply	126.00
262M/E As above, w/VOX	152.00
207 Ammeter	14.00
240 160m converter	110.00
241 Xtal oscillator	35.00
242 External VFO	179.00
244 Digital display	197.00
245 150 Hz CW filter	25.00
249 Noise blanker	29.00
Ten meter Xtal each	5.00
1102 Snap-up legs pair	1.00
570 Century 21 70w CW Xcvr	299.00
574 Century 21/Digital	399.00
670 Century 21 Keyer	29.00
276 Century 21 Calibrator	29.00
274 Century Digital Mod Kit	90.00
247 Antenna Tuner	69.00
277 Antenna Tuner/SWR Bridge	85.00
509 Argonaut 80-10cm 5w Xcvr	369.00
206 A Crystal calibrator	29.00
208 External CW filter	29.00
210 AC power supply	34.00
210/E 110/220 vac ps	39.00
215P Microphone w/plug	29.50
KR1A Dual paddle assembly	35.00
KR2A Single paddle assembly	17.00
KR5A Single paddle keyer, DC	39.50
KR20A Single paddle keyer, AC/DC	69.50
KR50 Dual paddle Ultramatic, AC/DC	110.00







670

KR50

NEW EAST STOCKS OTHER FAMOUS BRANDS

HUSTLER, BIRD, REGENCY CDE, ANT. SPEC., BEARCAT CONSOLIDATED, STANDARD, WILSON, SHURE, ASTATIC, TURNER.

VISA

master charge THE INTERBANK CARD

JOHN — WA4TKJ
NANCY—KA4BQD
STEVE—Manager-Technician

NEW EAST ELECTRONICS

1104 Washington Street **Williamston, N. C. 27892** **Hours M-F 8 AM-5PM SAT. 8AM-12 PM**

1-919-792-4874

calendar of coming events

The CVRA Journal will be glad to publish Events in your area taking place which are of interest to the entire area. Send information to CVRA Editor 1 month prior to Journal Publication date.

The following list was compiled by the CVRA Journal Staff with assistance from the ARRL, and various clubs conducting hamfest activities.

1979 HAMFEST CALENDAR

AUGUST

5 ..... WINCHESTER, VA.
12 ..... CONCORD, N.C.
18-19 ..... BRISTOL, TENN.
18-19 ..... FAYETTEVILLE, N.C.

SEPTEMBER

1 ..... CVRA Annual Meeting, SHELBY, N.C.
1-2 ..... SHELBY, N.C.
16 ..... AUGUSTA, GA.

OCTOBER

7 ..... ROCK HILL, S.C.
7 ..... NEW BERN, N.C.
13 ..... ASHEVILLE, N.C.
20-21 ..... ARRL Roa. Div. Conv. NORFOLK, VA.
27-28 ..... CHATTANOOGA, TENN.

FROM BACHELOR TO HUSBAND AGAIN

Continued From Page 3

effect with just one person moving on, just as it has not in the past. With all the talent and time which is volunteered each year, the CVRA will continue to grow and move into new areas which five years hence will be as surprising as looking back five years is to us now. I have been proud to have been a small part of all this and certainly will not completely divorce myself from the CVRA with this move....

In these years of attending hamfests and meeting folks on the air, I have come to know and enjoy a lot of fine people. Those warm memories will come in handy during those miserable Chicago winters to come. Many thanks to you all and the very best wishes for the years to come.

- Lindsay, W4IZI

FCC EXAMINATION SCHEDULE FOR FIFTH DISTRICT

CHARLOTTE, N.C. Jan. 10, 11 & July 11, 12
SALEM, VA. March 7, 8 & Sept. 5, 6
WILMINGTON, N.C., May 2, 3 & Nov. 7, 8

WINSTON-SALEM, N.C.

February 7-8	August 1-2
April 4-5	October 3-4
June 6-7	December 5-6

Persons wishing to take examinations at the designated cities should send a completed 610 form to the FCC Norfolk office at least 2 weeks prior to the examination date. The FCC will notify applicant by mail as to date, time and place and include a pass to admit person into examination room. All exams are by appointment only. You must bring your pass to get in.

Applicants with visual impairment or other disability must make prior arrangements with the FCC for exams.

The Norfolk office of FCC conducts RADIO OPERATOR EXAMS without appointment during these days: COMMERCIAL PHONE, Wednesday & Friday 9 a.m. to 12 noon. AMATEUR RADIO & TELEGRAPHY, Thursdays at 9 a.m.

GENERAL ELECTRIC

ATTENTION PE, PY, AND PR portable owners. I can do minor and major modifications and repairs to your units. Also GE pager repairs. Factory trained on GE personal products. FCC Licensed. For more information contact:

H. ALAN COPELAND WA4JOK
Rt. 1 Box 85
Belvidere, N.C. 27919
(919) 221-8410

JOURNAL DEADLINES DEFINED

Continued From Page 41

As you can see we follow strict deadlines, and you note only a few days are allowed for each phase of the work of putting the Journal together. We purposely plan for the Journal to be delivered to our circulation department on the 1st Friday of the month for Mailing on 1st Monday of month of publication. This routine is followed for each edition. You can substitute January dates above for the February issue, April dates for the May issue, and October dates for the November issue.

AD AND NEWS DEADLINES

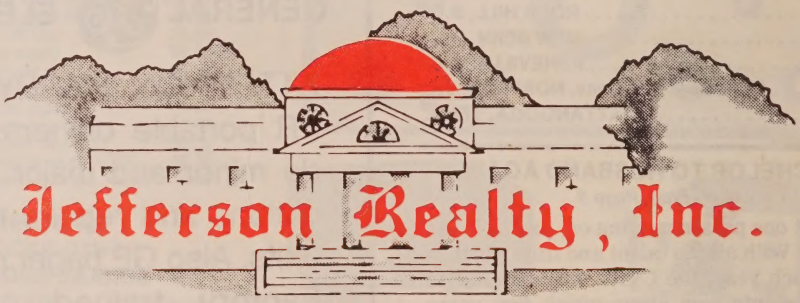
FEBRUARY ISSUE	JAN. 1
MAY ISSUE	APRIL 1
AUGUST ISSUE	JULY 1
NOVEMBER ISSUE	OCT. 1

- by Wayne C. Williams, Editor

TECHNICAL TIP - - - When stacking two antennas or baying a quad of antennas and one plans to use a power divider of the KLM or WOEYE variety, it is imperative that the individual feedlines connecting the antennas to the power divider be of equal lengths. It is not necessary that the lengths be a multiple of half-wavelengths but it does not hurt by any means.

Advertisers' index

Bino Communications	45, Ins. Bk. Cover
Bob's Amateur Radio	16,17
Business Card Advertising	44
CVRA Associate Membership Application	33
CVRA Advertising Rates	42
Copeland	47
Fayetteville Hamfest	15
Georgetown Communications	40
G.I.S.M.O. Electronics	11
Golden Triangle Printing Co.	44
Hometronics	28
Holiday Steel Rule Die Corp.	Ins. Frt. Cover
Jefferson Realty	48
Maury's VHF-UHF	8
New East Electronics	6,41,46
Radio Communications of Roanoke	36
Rock Hill Hamfest	31
Shelby Hamfest	4,5
Tidewater (Norfolk) Conv. & Hamfest	18
Two Way Radio of Carolina	13
Vickers Electronics	29
West Antenna Service	12
Williams Radio of North Carolina	20,35



Jefferson Realty, Inc.

520 W. Friendly Ave. Greensboro, N. C. 27401

A HouseSOLD WORD

Multiple Listing Service

Certified Real Estate Appraisers

Market and Feasibility Service

REALTOR®

W. B. "Chick" Holliday, President
WA4NHC
Phone 275-5355

TEN-TEC

OMNI - D
544, 540
ARGONAUT
CENTURY 21

Accessories

We're 100% Ten-Tec.
How About You?

BI- COMM **BINO COMMUNICATIONS**

2401 DEVEROW PLACE
GREENSBORO, N.C. 27407
(919) 292-8052

Amateur - Commercial Sales and Service

Office Hours:
Daily - 3 PM to 10 PM
Sat. - 9 AM to 4 PM

K4CJZ
CHUCK

WA4IHA
SUE

KA4HIC
KEN

CAROLINAS-VIRGINIA REPEATER ASSN.
Post Office Box 3325
Burlington, North Carolina 27215

BULK RATE
U. S. POSTAGE
PAID
BURLINGTON, N.C. 27215
PERMIT NO. 271

FORWARDING POSTAGE GUARANTEED
ADDRESS CORRECTION REQUESTED

THIRD CLASS MAIL

"To Serve . . . . ."

AL T. ROSS K4CAW
2404 SPRINGWOOD DR. 1287C
GREENSBORO, NC 27403

THE CAROLINAS-VIRGINIA REPEATER ASSOCIATION STATE DIRECTORS, VICE DIRECTORS AND ASSISTANTS

For Assistance in Repeater Coordination, Frequency Coordination, Changes in Repeaters, and Any other Assistance You May Require from the CVRA. Contact Your Local Director or His Assistant.

VIRGINIA

DIRECTOR
Carter Cogle, K4ARO
1667 Varina Avenue
Petersburg, Va. 23803
(804) 733-8411

VICE-DIRECTOR
Amos R. Rhames K4WQS
2830 Blairmont Dr.
Danville, Va. 24541
(804) 792-0443

ASST. DIR. (TIDEWATER)
Wally Burkette, WA4KXV
242 Raintree Road
Virginia Beach, Va. 23452
(804) 486-1555

ASST. DIR (SW VA.)
Bob May K4SE
Post Office Box 30
Jonesboro, Tenn. 37659
(615) 753-3662

ASST. DIR. (N. VA.)
Thomas Gooding K4LHB
206 West Maple Ave.
Sterling, Va. 22170
(703) 430-3202

NORTH CAROLINA

DIRECTOR
Ken Woodard WA4BVW
Route 2, Box 407
Canton, N.C. 28716
(704) 235-8354

VICE DIRECTOR
Ed (Buff) Buffington W4VGZ
2736 Woodbury Drive
Burlington, N.C. 27215
(919) 227-6356

ASST. DIR. (CENTRAL)
Larry H. Schwarz, WA4RHY
1752 Wellons Drive
Fayetteville, N.C. 28304
(919) 484-6590

SOUTH CAROLINA

DIRECTOR
Jack N. Watson, Jr. W4YPD
207 Lingstrom Lane
Columbia, S.C. 29210
(803) 772-7350

VICE DIRECTOR
Bob McCormick K4FRX
446 Leton Drive
Columbia, S.C. 29210
(803) 772-9681

ASST. DIR. (EASTERN)
Lennart Bjerken,WB4USY
P.O. Drawer 5858
Shaw Air Force Base,S.C.
(803) 481-2436

ASST. DIR. (COASTAL)
Thomas L. Martin, WB4PVL
212 Savannah Highway
Walterboro,S.C. 29488
(803) 538-5121